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ORIGINAL LECTURES.

MALIGNANT TUMOR OF THE UPPER JAW AND CYSTIC TUMOR OF THE NECK.

A Clinical Lecture, delivered at the City Hospital, Charleston, S. C.

By R. A. KINLOCH, M.D.,
PROFESSOR OF SURGERY IN THE MEDICAL COLLEGE OF THE STATE OF SOUTH CAROLINA, CHARLESTON, S. C.

(Reported by John L. Dawson, Jr.)

Gentlemen: I bring before you this morning two cases of much interest. One, this middle-aged colored man, with a tumor of the upper jaw; the other, this young white man with a tumor of the neck, sent to me as a probable case of "aneurism of the carotid."

The first patient, I saw for the first time just before coming into this room, having been stopped on my way here by one of my colleagues, and asked to give an opinion as to the propriety of an operation for the relief of the sufferer. This man comes here from a distant part of the State, and is willing to submit to any surgical operation that may be deemed advisable.

You notice the enlargement of the upper jaw on the right side, and see the two fistulous openings in the soft parts discharging a thin pus. The soft parts of the cheek, integument and all, are fixed to the bone, and cannot be made to glide over it, as is usual in the healthy condition. Let us look into the mouth, first, I see that the teeth of the jaw on this side are gone. The man says that these loosened and dropped out one by one. This is ever a suspicious circumstance in connection with tumors or diseases of the jaws, and indicates serious if not malignant disease. Such disease often begins in one of the alveolar cavities, but may start elsewhere, as between the outer and inner lamina of the bone, or in the antrum, and finally involve the alveolar border as well.

In this case the mass of bone is assuredly implicated; it is no simple tumor of the soft parts. Upon further examination, it is seen that the bone expansion is more marked towards the cavity of the mouth, and that the tissues composing the roof of the mouth are thoroughly involved. The mucous membrane of this region is granular, thickened, and ulcerated. Pressing the bone, or the tumor, between the fingers that I have within the mouth and those upon the outer side resting upon the cheek, I note that the force is communicated from within to the outer side, or from without to within. The solid bony tissue has, for the most part, disappeared, or been substituted by soft, diseased tissue which makes up the bulk of the neoplasm, or new growth. The bone has literally been fed upon and thus consumed. At points, however, there are portions of bone remaining which crack under pressure. Trace the growth backward, with the finger in the mouth, and we find it goes beyond the palate bone toward the pharynx and the base of the skull. We realize that we have to deal with an extensive and a most destructive growth, involving alike bone and soft parts that are connected more or less intimately with vital portions of the organism. Wherever it began, it has been long infiltrating adjacent structures, and promises still further to extend its ravages by a forced, unnatural union with the elements of all the tissues. Secondary and inflammatory changes also further the processes of development of the original growth. Such are what we may in part call malignant features of the disease. At present we can perceive no general infection, but such must soon follow, and the vital fabric must finally yield to the fearful ravages that, I fear, neither surgery nor medicine can arrest. Need I name to you this disease? Practically, we can call it a malignant tumor of the jaw. Perhaps it is entitled to be called cancer or carcinoma. Perhaps, and I think more likely, for reasons which I cannot now, for want of time, fully explain, it may be regarded as a sarcoma. Clinically, there is but little difference between some disease differently named, and, in the case before us, with the progress that has been made, and the destructive changes that have resulted, a pathological argument or demonstration will not very much aid the surgery for the occasion. I hope to explain this to you more fully hereafter.

We often have sarcomata of the jaws amenable to treatment. But in regard to this case of disease, I hesitate not to tell you that in my belief, surgery is powerless. I cannot sanction an operation here. By no operation, however bold, or however skilful, could we expect to insure the removal of all the infiltrated morbid elements. A removal of all apparently diseased structures is not sufficient in such cases. You must go far and wide of the disease, and seldom do we know certainly when we have gone far enough. Operations in such cases as this bring only discredit upon surgery. There may be a chance for bold operating, for an exhibition of skill as a dissector. To be able to say how extensive have been incisions, how numerous the vessels divided and tied, how vital the parts exposed, seems, from reports of cases we see in journals, to be the aim and satisfaction of some operators. These men do not represent surgery. I beg you not to be captivated by their examples or teaching. I will then, for reasons that you must appreciate, advise that this poor man be left to his fate, with the simple comfort that can come of judicious palliative treatment. We may assuage his suffering; we cannot save, and can hardly prolong his life.

This other case is a very different one. You see we have here a tumor of the right side of the neck, below the larynx, and over the course of the carotid artery. The case was sent to me as probably one of *carotid aneurism* by a medical friend in the interior of the State. The tumor is spherical, as large as an orange, tense, and, as I think, fluctuating to the touch. It is said to have been developing for two years, and not to have given pain, *mark you*, until three weeks ago, when there began a "dull aching," which has continued up to this time. My medical friend who saw the case in its incipiency thought there was then an obscure pulsation in the swelling.

The position of the tumor is one where aneurism is at times found. We may have many other forms of morbid growth in the same site. Glandular tumors in this region are common. Fibroid, or fibro-cellular, tumors also occur here, and at times it is possible that such growths may receive a pulsatory movement from their proximity to the main artery of the neck. Besides these we have, more rarely, cystic or fluid tumors in this location. We hear such, at times, called "hydroceles" of the neck.

The origin of such cysts is obscure. They may begin *de novo*—there being no natural cyst to develop into a tumor—in the loose connective tissue of the region and grow to an enormous size, the tumor finally hanging down over the sternum. The growth before us, from its shape, elasticity and fluctuating feel, I decide to be a liquid and not a solid tumor. The most careful examination fails to connect with it any pulsation. Pressure upon the carotid at the sterno-clavicular junction in no way affects the size of the swelling. It is therefore not an aneurism. I exclude the solid growths at times met with here, and I think I can also exclude the idea of malignancy. We have, in other words, to deal neither with a cancer nor a sarcoma.

The appearance of the patient, the time the tumor has been growing, the non-infiltrating character of the disease, all sustain this conclusion.

Cystic or fluid tumors, however, I must not forget to tell you, are not always simple or benign. There may be within, connected with the sack, a cancerous or a sarcomatous element. But I will not wander so far as to consider such a matter now.

One point more: an abscess, as you know, is a kind of fluid tumor, and we must not fail to consider the question of abscess in connection with the case before us. The growth of two years, and the absence of all signs of acute action at present might permit us to exclude abscess as we have done certain kinds of tumors. Chronic abscesses, however, often exist a long time without appreciable inflammatory symptoms. Such are, however, seldom found precisely in this region without being connected with glandular or with spinal disease. There are no evidences of such connection with the tumor before us. If originally there was a glandular swelling, this has disappeared by disintegration. But to consider one feature in the case before alluded to; there has been *pain for several weeks*, and since the commencement of this acute symptom, the tumor has become more tense, or, as the patient thinks, "has grown more rapidly." Without an external trace of inflammation, pus may form within a cyst. You see, gentlemen, that the question of diagnosis, although not certainly fixed, is narrowed down very decidedly. I come to the question of the *contents* of the cyst, or the fluid tumor. Fortunately, we have a means of absolutely determining this matter. We can explore or aspirate almost any morbid growth, and with but little risk to the patient. We can abstract the contents of a fluid tumor and examine the material to render certain a diagnosis. This is what I will now do before you.

This little instrument, the hypodermic syringe, answers the purpose very well in such a case. I plunge the delicate needle, or trocar, into the centre of the swelling, as you see, and then retract the piston. The glass barrel of the little syringe slowly fills with a turbid, viscid liquid as I proceed. This is sufficient. I withdraw the needle, and finish the little operation. To be certain, we might subject the liquid to microscopical examination, but this is scarcely necessary for my present purpose. The fluid is evidently sero-purulent in character. The pus is in small quantity. We have no simple abscess of either the acute or chronic form. The fluid withdrawn substantiates this opinion. What is next to be done to relieve the patient? This is at last the most practical, because the vital question; we must empty the cyst, which I will now do by a free incision, and then make use of means for destroying its secreting surface, so as to make it fill up and heal like an abscess. You see how my free incision permits the escape of pus, together with the viscid glairy matter, and some little blood. We will now wash out the cavity with a weak iodine solution (℥j of the tinct. of iodine to ℥vj of water), then put in a drainage-tube, and cover the neck with a layer or two of borated cotton, secured in place by a bandage. The object of the iodine is twofold: it is antiseptic and also a good stimulant to rouse up the action of the cyst wall and effectually change the character of the secreting surface. We will expect to keep the cavity aseptic, by repeated injections of iodine solution, and hope that the boy will recover.

I cannot explain to you the origin of this disease; my finger passed to the bottom of the cavity, failed to discover any trace of a solid growth, glandular or otherwise. The sac evidently extends deep into the tissues of the neck and is in close relation to the important vessels.

[This patient made a good recovery, and returned home three weeks after the operation.]

ORIGINAL ARTICLES.

A CASE OF MULTIPLE FRACTURE.

BY J. HENRY C. SIMES, M.D.,
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THE following case is reported as being one of unusual occurrence, and also on account of certain peculiarities, which may be stated as follows: First, the number and gravity of the injuries; second, the course of treatment adopted; and, third, the result.

In regard to the first, the multiplicity of the fractures, it is very rare to meet with this condition, as a result of traumatism not complicated with some constitutional diathesis. Most of the cases reported by authors have occurred in patients who, at the time of accident, were suffering from cancer, syphilis, rickets, gout, or other constitutional disease, and which are known to be predisposing causes; but in the case here related, there were no existing cause or causes as far as could be ascertained. The fractures were the result of uncomplicated traumatism.

The second point—the treatment—is seen to be one of conservative surgery, and also one in which antiseptics were employed as auxiliaries. That the latter were the principal and only reason for the successful termination I am not prepared to decide; but it does seem to me that the result was, in a measure, determined by this method of treatment. When the course of similar injuries, treated by a non-antiseptic method, is contrasted with this case, it would appear that it is an exception to the general rule, and it is not unreasonable to suppose that the possibility of the favorable termination was somewhat influenced by the antiseptic treatment.

Finally, the result—this was unexpectedly very satisfactory, and may, I think, be attributed in part to the patient herself, who was of a decidedly phlegmatic temperament, and never lost hope, but, from the beginning, was firmly determined upon recovery; in part, to the method of treatment adopted; and, in part, to the unremitting care and attention of Dr. Edward S. McIlvaine, the resident of the surgical ward, under whose charge the patient was placed.

Louisa M., aged 29 years, was admitted into the hospital on the evening of September 19, 1882. Two hours previous to her admittance, she had jumped from the third-story window of her dwelling. I saw her early the following morning, and an examination of her injuries was made. There were two simple fractures of the inferior maxillary bone—one situated at the ramus, the other at the symphysis: a simple oblique fracture at the middle third of the left femur; a compound comminuted fracture at the lower fourth of the right femur; contusions of the skin over both knees and on the arms; the right knee-joint was much swollen, the effusion being within the capsule of the joint, and very distinctly floated the patella. On account of this swelling of the joint, it was difficult to ascertain the exact condition of the bones constituting it, but it was thought that there was an intercondyloid fracture of the femur communicating with the cavity of the joint. The wound of the thigh was about one and a half inches long, located at the outer side of the thigh, on a line and two inches above the outer condyle of the femur. Upon passing the finger into this wound, it came in contact with the shattered bone, a fragment of which was found separated from the shaft, and lying in the lacerated muscular tissue.

The general condition of the woman was remarkably favorable; there had been very slight, if any, shock; the temperature was 100° F.; the pulse about normal; she had complained but little of pain; even while undergoing the examination necessary to determine the extent of her injuries, she apparently suffered very little, and certainly did not realize the gravity of her condition. From my examination of the injuries, and the state of the patient, the following treatment was decided upon:

The fractures of the inferior maxillary bone were in very good position, and a Barton's head-bandage was applied, which admirably fulfilled very indication for the treatment of this injury.

The simple fracture of the left femur was dressed by extension, and a large sand-bag placed at the outside of the limb, extending from above the crest of the ilium to below the foot. The extension was obtained by means of two broad strips of adhesive plaster—one placed on the external and one on the internal surface of the limb—they were secured by transverse strips, and reached from the upper extremity of the lower fragment of the fractured femur to two inches below the foot, over which was applied a spiral-reverse roller: a piece of splint board, wide enough to prevent pressure upon the malleoli by the adhesive plaster, was attached to the lower end of the strips of plaster. A cord having a weight attached to it was fastened to the board, and passed over a pulley at the end of the bed. The counter-extension was obtained by elevating the foot of the bed.

The treatment of the injury to the right limb was the most difficult to decide. There was a compound comminuted fracture of the shaft of the femur, and also, possibly, an intercondyloid fracture communicating with the knee-joint; effusion into the joint cavity was undoubtedly present. A careful examination of the circulation and temperature of the leg showed nothing abnormal. The general condition of the patient, as previously mentioned, was remarkably good, and, notwithstanding the great gravity of the injury, I thought, with unusual care and attention, an operation might be avoided, at least for the present, since, with her other injuries, an amputation would, in all probability, prove the straw too much.

The examination had shown that a portion of the fractured femur was detached and lying loosely in the muscles; this could only act as a source of irritation, and it was thought best to remove it. In order to do this, the wound was enlarged, under the carbolic spray, and the fragment of bone removed. The piece of bone, when removed, proved to be much larger than was anticipated: it measured three inches in length, and included about half the circumference of the femur. It was entirely denuded of periosteum, and from that portion of the shaft of the bone, just above where it begins to expand into the condyloid eminence. The wound was then thoroughly washed with a watery solution of carbolic acid, using a syringe to force the solution into all parts of the wound; a folded piece of lint, saturated with carbolized water, which covered the wound and upper surfaces of the thigh and knee-joint, was then applied. To prevent all motion, as far as possible, the limb was placed on pillows in a long fracture-box, which reached from the perineum to below the foot, the lower part being elevated to form an inclined plane. An irrigating apparatus was then arranged, so that the piece of lint, covering the thigh and wound, was kept constantly wet with the carbolized water. This completed the dressings, and the patient stated she felt as comfortable as possible under the circumstances; indeed she was soon asleep.

The day following I found the patient had developed no unfavorable symptom; she was in good spirits, and more resigned to her confined position. In consultation with my colleague, Dr. Nancrede, it was concluded advisable to let well enough alone, and, therefore, the same treatment was continued. On September the 19th, the third day after the accident, it was found necessary to make some change in the manner of applying the carbolized water. It was not possible, on account of the other injuries, so to arrange the irrigation, in order to prevent the water from passing under the patient's back, and being a constant source of annoyance to her. To avoid this difficulty, the irrigating apparatus was removed, and in its place the folded lint, covering the thigh and wound, was wet every fifteen or twenty minutes with the carbolized water.

The above treatment, without any change whatever, was continued for twenty days. During all this time there were no unfavorable symptoms; the effusion in the knee-joint gradually disappeared; no pus was discharged from the wound, nor were there any collections in the tissues around the injury. A very small amount of a lemon-colored fluid, just enough to stain the lint in immediate contact with the wound, was all the discharge ever observed. The pain at no time was so severe as to require anodynes; occasionally, at night, a small dose ot sulphate of morphia was administered to relieve restlessness. The appetite remained good—in fact, she complained of being hungry, not relishing the liquid diet necessitated by the fractures of the jaw.

My term of service at the hospital having expired, the patient was taken charge of by Dr.

Packard, and I have since ascertained that there was an uninterrupted course of improvement until she left the hospital on December 11, 1883. At the present time, seven months after receiving the injuries, she has so far recovered as to be able to perform her house duties, and to walk without pain or difficulty. A slight stiffness of the right knee-joint is the only remaining lesion of her injuries.

VLEMINCKX'S SOLUTION IN ACNE ROSACEA.

BY H. W. STELWAGON, M.D.,

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THE condition known as acne rosacea, or rosacea, is so obstinate in its nature that in many instances almost every remedy is barren of any marked or permanent result. What will prove useful in a certain proportion of cases, will be of little avail, or even absolutely valueless, in others. The importance, then, of having at command a large choice of remedies is evident. Remedies are referred to here in the sense of local application only, as it is generally by such means alone that any good is obtained. Internal medication is rarely of advantage, and is seldom called for, except to correct faulty conditions in the general health that may be present. The use of Vleminckx's solution in this affection is not original with myself, as it has been, to my knowledge, so used by Dr. Duhring and Dr. Van Harlingen, as well as by other dermatologists. This application of it is, however, but little known to the general profession, and it is for the purpose of calling further attention to its value that the present communication is written.

The solution is made by adding one part of lime and two parts of sublimed sulphur, or flowers of sulphur, to twenty parts of water. This is boiled down to about twelve parts, cooled, and then filtered. The result is a dark, orange-yellow colored liquid, with a strong odor of sulphuretted hydrogen. This is to be diluted as circumstances require. A brief description of a few cases will illustrate its value and mode of application.

CASE I.—Albert B., a druggist, aged 19, applied at the Philadelphia Dispensary for Skin Diseases, January 2, 1882. The nose was erythematous, and, with the surrounding parts, presented a few acne pustules and numerous comedones. Health was fair, with occasional attacks of indigestion. He was ordered to make applications of hot water to the parts at bedtime, subsequently press out as many comedones as possible, and then apply for several minutes a lotion made up of one part of Vleminckx's solution to five of water. In addition, he was prescribed an aperient mixture to be used when required. He returned at intervals of ten days, and the proportion of Vleminckx's solution was gradually increased to one part to three. Improvement ensued from the start, and at the end of two months the patient was so well satisfied that he ceased his visits.

CASE II.—Morris F., peddler, aged 40, applied at Philadelphia Dispensary for Skin Diseases, February 2, 1882. Nose and immediate neighborhood and forehead near middle were markedly erythematous, and presented a number of small acne papules and pustules. About the nose the capillaries were enlarged. Had indulged some years previously in alcoholic excess, but during the past few years had been temperate. Disease had existed three years. General health good. An aperient was ordered to be used occasionally, and at bedtime to apply, for several minutes, a lotion of one part of Vleminckx's solution to four of water. Patient returned in three weeks somewhat improved. Strength of lotion was gradually increased to one part to three. From this time on, patient continued to improve steadily, without further increasing strength of wash. At each visit, the larger capillaries were incised. Last visit was made April 24, about three months after beginning treatment. Patient was well satisfied with the improvement in his appearance, and, although not absolutely well, failed to return.

CASE III.—Jane M., aged 36, domestic, presented herself for treatment at the service of the Northern Dispensary, March 11, 1882. Chin, nose, and middle of forehead dull red, and covered irregularly with acne pustules; enlarged capillaries about nose. Health was good, and the functions well performed, except that there were occasional attacks of indigestion. An aperient tonic mixture was ordered for the dyspeptic symptoms, and a lotion of one part of Vleminckx's solution to five of water, to be applied for several minutes every evening. Patient returned three weeks later, and condition had much improved; same was continued. At end of two weeks, patient again appeared, and marked improvement was noted. The acne had almost entirely disappeared, and the rosacea was less marked. The larger vessels were incised. Lotion was increased one part to four, and later, one to three. Improvement continued, and three months after her first visit, patient was completely rid of her trouble.

Examples such as are just cited, might be multiplied, as the disease is a rather common one at the dispensaries, and the record-books contain a number of such cases, showing the value of this remedy, and I may here add, also a proportion of failures. In some cases, it is necessary to gradually increase the strength of the lotion, even up to the pure solution. This is, however, rare. The strengths as given in the above cases are generally sufficient. At times it is well to intermit treatment for a few days, in order that the desquamation it usually causes may disappear. The milder strengths cause very little desquamation, and, in moderate cases, are sufficiently efficacious. Occasionally, especially in the more obstinate cases, the lotion may be advantageously made stronger. In most cases, the improvement would be more rapid were the lotion applied twice daily, night and morning. It is difficult, however, to get patients to make applications early in the day, on account of personal appearance. The severe forms of the disease, those in which hypertrophy is a marked feature, are comparatively rare, and as yet I have had no opportunity of testing the solution in such cases. It would probably be of little value, as the disease, when so advanced, is rarely benefited by any treatment, except those plans in which operative measures figure prominently.

Even in the moderate forms, some cases fail to respond to the application of the solution, and other treatment must be instituted, in order to secure improvement.

Vleminckx's solution is not, therefore, in any sense, a specific—far from it. It frequently fails and disappoints. Upon the whole, however, according to my experience, it is, for the milder forms of the affection, the most reliable single remedy.

MEDICAL PROGRESS.

Galvanism in Nervous Cephalalgia and Hemicrania.—Dr. Gasparini has successfully employed galvanism of the cervical sympathetic in cases of nervous headache and hemicrania. These cases, as a rule, present symptoms of indigestion, and in many cases malnutrition. After a short course of treatment the patients, in most of the cases, regained their digestive powers, nutrition was improved, and the head symptoms ceased.—*Gaz. degli Ospitali*, May 30, 1883.

Periodic Recurrent Paralysis of Ocular Muscles.—A remarkable case of paralysis of the ocular muscles, coming and going every month simultaneously with the appearance and disappearance of the catamenia, has been recorded by Von Hasner (*Centralblatt für klin. Med.*, No. 21). It occurred in a girl aged seventeen years, of good physique, who had suffered since her thirteenth year from ptosis of the left upper eyelid, which set in every month, lasted three days, and was accompanied at its commencement by headache and vomiting. Menstruation began at the age of fifteen years, when it was observed that this coincided with the monthly ptosis of the left eye. The author had the opportunity of seeing the patient at the onset of one of her periods, and then made out total palsy of the muscles of the left eye; the second day of the menstrual period witnessed a regression of the paralysis of the left eyelid, of the headache, and vomiting. With the cessation of the menses on the third day, a gradual restoration of the movements of the eye took place, the pupil remaining dilated a little while longer.—*Med. Times and Gaz.*, June 9, 1883.

Malarial Laryngitis.—Dr. E. Briand having seen certain cases of false croup of no other than malarial origin, concludes that: 1. There exists a form of laryngitis due to malaria, characterized by congestion of the larynx, giving rise, from a symptomatic point of view, to the functional signs of true croup. 2. This variety of laryngitis differs from laryngismus stridulus by the symptoms, course, and prognosis, and generally yields to treatment by sulphate of quinine. 3. It is not very rare in infants, and may be recognized by the fact that it is preceded or followed by malarial manifestations.—*Revue Méd. Franç. et Étrang.*, May 26, 1883.

The Internal Employment of Glycerine.—In a recent *thèse de Paris*, M. Tisne (*Journal de Thérapeutique*, April 25) gives an account of the results of the employment of glycerine by Drs. Jaccoud and Ferrand. The former prescribes it as a stimulant to the digestive organs in the non-febrile stage of phthisis, when for any reason cod-liver oil ceases to be tolerated. The following mixture is given daily in two or three doses: Glycerine, forty; and rum or cognac, ten grammes; with one drop of essence of mint. This aromatized alcoholized compound, of agreeable flavor, is well tolerated by the stomach, and even after long uninterrupted employment it causes neither satiety nor disgust. The addition of the rum or brandy has simply in view the modification of the insipid taste of the glycerine, and to assist its digestion. The amount of glycerine may be raised to fifty or sixty grammes, but only in persons who do not exhibit any sign of abnormal excitability of the heart or nervous system; and restlessness, unusual loquacity, obstinate insomnia, or an increase of temperature announce that the proper dose has been exceeded. Dr. Ferrand makes daily use of glycerine in his wards at the Laennec, and it is found to be readily absorbed, without producing any toxical effects. It diminishes constipation in almost all cases, and yet moderates diarrhœa when this is present; and under its use sleep becomes calmer. It has an evident effect on nutrition, its employment in most cases leading to an increase in weight after the first fortnight. In tuberculous cases it induces a considerable amendment in the functional manifestations of the disease, such as dyspnœa, cough, and sweating. The expectoration is the symptom which is least influenced. The local condition of the lung also remains stationary, and the physical signs undergo no change. The action of glycerine on the liver is exhibited by the increase of its size and by the more abundant flow of bile. With respect to its action on the kidneys, there are observed a more abundant diuresis and an absolute and relative increase of urea, the chlorides and phosphates eliminated by the urine. In affections of the genito-urinary organs, M. Tisne has found that under the use of glycerine the alkalescence of the urine seems to diminish, while purulence, when present, becomes considerably lessened.—*Medical Times and Gazette*, June 16, 1883.

Action of Mixed Vapor of Chloroform and Air.—Prof. Paul Bert has shown that ʒijss of chloroform vaporized in one quart of air will anæsthetize a dog; ʒvj of chloroform in a quart of air will kill the dog. Wishing to know if the same effects would be produced in case the experiment is continued for several hours, by a particular arrangement he was enabled to protract the experiment during ten consecutive hours. ʒss of chloroform vaporized in a quart of air produces no appreciable result; ʒj in one quart of air was respired without trouble, and with no diminution of sensibility, but there was a decrease of temperature amounting to four or five degrees.; ʒjss to ʒij in the same quantity of air produced great diminution of sensibility, but was only manifested after a considerable time; the temperature fell rapidly, and after seven hours of the experiment the animal died with a very low temperature.

The temperature was always lowered in proportion to the duration of the experiment. In some cases the temperature was lowered and death took place before anæsthesia was produced. In these cases, depression of the nervous system was not the cause of death. In whatever manner death is produced, the heart always beats to the end. Chloroform does not act, then, upon the heart. Chloroform should be given intermittingly, and animals which have sustained a loss of blood are much more sensible to it, and much more likely to die under it than otherwise; and the safest procedure is to cause anæsthesia rapidly, and then give in small and intermittent doses.—*Journ. de Méd. de Paris*, May 26, 1883.

Contagion of Measles.—Dr. A. Beclèra has made a careful study of the conditions attending the contagion of measles, from which we select his more important conclusions.

Rubeola is contagious from the commencement of the period of invasion to the end of the stage of eruption, a period extending through from eight to ten days. The contagious principle is contained in the secretion of the respiratory mucous membrane, and it still remains to be proved that it has anything to do with the cutaneous desquamation. Although this contagion is diffusible, it is so only to a slight extent, and soon looses its active properties, and does not remain in the rooms occupied by the sick. The period of incubation lasts from thirteen to fifteen days; no immunity is conferrred by the presence of any other eruptive disease.—*Practitioner*, June, 1883.

Idiopathic Cramp of the Tongue and Cremasters.—**Berger** states that cramps localized in the tongue alone are so rarely met with that their existence has been doubted. He describes two cases, however, where this condition was well marked. In both there was bilateral clonic spasm of the protrusors of the tongue. Reflex cremasteric spasms are not rare. But in two cases he observed the spasm was clearly idiopathic. It occurred both by day and by night, each attack lasting two or three minutes; the pain was very great. In one case atropia injections were successful; but failed in the other, where galvanization (from the spine to the scrotum) afforded complete relief.—*Brain*, April, 1883.

Extirpation of the Spleen.—**Albert Blum** gives a tabulated list of splenectomies for wound or hernia of that viscus, dating from 1581 to 1874, all the patients having recovered. To this is added Credé's list of thirty cases of removal for splenic tumor, from 1549 to 1874, with six recoveries. In the latter table every patient who had leucæmia died. Of the recoveries, two were cases of cyst, and four of hypertrophy of the spleen. Extirpation of the spleen, as shown by Credé, Martin, Czerny, and others, is always followed by an increase in the number of white-blood globules, a fact which confirms the physiological theory that the office of the spleen is to transform the white globules into red. After a time, however, the white globules return to the normal proportion, the thyroid gland seeming to take upon itself the functions of the spleen.

Blum draws the following conclusion: 1. When there is a hernia of the spleen, due to a wound, the surgeon is authorized in cutting off the hernial protrusion. All the observations regarding this operation show its benignity and its termination by recovery. 2. Extirpation is contra-indicated in cancer or hypertrophy, either from hepatic or paludal causes. The results of operation in these cases are very bad. 3. Cysts of the spleen are curable by easier and less dangerous means than extirpation of the organ. 4. Extirpation may be indicated in cases of movable spleen if the accidents are serious. In these cases it is relatively easy. 5. It may be affirmed to-day that splenectomy is practicable in man without altering the conditions of health; the operation is only exceptionally indicated. It is difficult to bring it to a safe termination, and there are great chances that it may terminate rapidly in death either by hemorrhage or shock.—*Archives Gén. de Méd.*, June, 1883.

The Bread-pill Cure of Hysteria.—MM. **Landouzy** and **Ballet**, in the *Revue Mensuelle de Médecine*, give the history of an hysterical patient to which it is well to give an extended publicity, not because it presents any novel feature, but as a proof of the scientific errors of those ill-trained minds which attribute the cure of hysteria to supernatural influences. An hysterical patient, twenty-six years of age, who had previously suffered from chorea, was received in the wards of the Charité. There was very marked contraction of the lower limbs, and the patient was unable to execute the slightest movement, not being even able to raise herself in bed. After one or two hypodermic injections of morphia, given at her express desire, she was told that she should have a more energetic remedy, and must use it cautiously. On October 7th, bread-pills were prescribed, and the next morning she related that, wishing to poison herself, she had swallowed the pills: at once the effect was terrible, but soon after she was able to walk a little, and eagerly asked to have another pill; this was accorded, and resulted in her complete recovery. Two days later she helped to clean the wards. In a month's time, she left the hospital.—*British Med. Journal*, May 12, 1883.

The "Shoulder-arm" Type of Paralysis.—**Erb** has shown that in many subjects there is a motor point above the clavicle, opposite the transverse process of the sixth cervical vertebra (corresponding anatomically with the cord formed by the fifth and sixth cervical roots), at which faradization brings about contraction of the infra-spinatus, deltoid, biceps, brachialis internus, and supinator longus chiefly, as well as sensations over the shoulder, and parts innervated by the median. On the other hand, a number of cases of atrophic paralysis have been described in which these very muscles were implicated. Hence it was concluded that in such cases either the gray matter giving origin to the motor roots, or the motor roots themselves of the fifth and sixth cervical nerves were the seat of the lesion. Vierordt describes a case which lends considerable support to this localization of spinal influence. A man after an explosion was found to have received certain injuries. Among other symptoms was considerable swelling above the left clavicle, with loss of power in the corresponding arm. Four months afterwards he was found on examination to have several muscles atrophied and paralyzed, viz., the deltoid, infraspinatus, teres minor, subscapularis, biceps, brachialis, supinators. They all gave degenerative reactions to electrical stimuli. Sensation was abolished over the deltoid; much diminished about the clavicle; diminished over the median area of the hand. Faradization at Erb's motor point on the right side produced contractions of the muscles corresponding to those paralyzed on the left side.—*Brain*, April, 1883.

Atropine in Epilepsy.—Dr. **Max Weiss** gives very complete details of two cases of epilepsy, in the first of which (patient æt. 16) he used a solution of sulphate of atropine gr. $\frac{1}{3}$ to $\frac{1}{2}$ in f℥ijss of distilled water, in doses of gtt. x morning and evening for the first four days. The dose was then increased to about gr. $\frac{1}{25}$ daily, no toxic symptoms being produced. In a month the daily quantity was increased to gr. $\frac{1}{20}$. The other patient was treated in much the same manner, except that oxide of zinc was used at one time with the atropine. Both patients markedly improved, and the medicine being continued, had no epileptic convulsions for more than two months. **Weiss** therefore draws the following conclusions: 1. The bromine preparations when given in large doses always produce disagreeable disturbances of the digestive system, and will be superseded by atropine. 2. Atropine has already lessened, in very small doses, the vehemence and duration of single epileptic attacks, and has lengthened the intervals. 3. Atropine medication is successful in all forms of epilepsy. 4. When it is desired to obtain lasting results from atropine, it must be given in such doses that the lighter toxic symptoms—dryness of the throat and paralysis of accommodation—shall be interrupted. 5. As the atropine medication is continued, the tolerance for it improves so much that the continued administration of gr. $\frac{1}{13}$ a day (in the first case mentioned) produced only very slight toxic symptoms.—*Centralb. für die Gesammte Thérapie*, June, 1883.

Ergotine Hypodermatically in Prolapsus Ani.—Dr. Jette describes his observations with this treatment, first introduced by M. Vidal, at l'Hôpital St. Louis. The preparation is composed of Bonjean's ergotine grs. xv, cherry-laurel water ℥j. It should be freshly made, so as to be of a limpid color and fresh and agreeable odor. The injections are made every other day, commencing with fifteen drops, and, if this is insufficient, going on to twenty or twenty-five. This amount is inserted very slowly into the fibres of the sphincter to the depth of from three-quarters to one and one-half inch. Severe lancinating pain is caused, which then becomes dull and continuous, only ceasing after some hours. After three or four injections contractions of the sphincter and fibres of the intestine commence. A sense of constriction and traction upwards is felt by the patient and observed by the surgeon. Various disturbances may take place; thus, if the doses of ergotine are too weak, there may be frequent desire to go to stool and to pass urine; and when they are too strong there may be spasm of the neck of the bladder, with temporary retention of urine. In some persons M. Vidal observed a tendency to vertigo or syncope, and painful præcordial constriction, with a hard, close, somewhat slow pulse. The later injections become more active, as if cumulative, and cause a more prolonged tenesmus than the early ones. The duration of treatment varies from a few days to some weeks, and seems quite independent of the solution employed, the dose injected, and the intervals observed. To render the cure certain when once effected, it is of importance that three or four supplementary injections should be made.—*Practitioner*, June, 1883.

Injection of Carbolic Acid in Neuralgia.—Dr. Schrumpf publishes in the *Gazette Médicale de Strasbourg* an account of the success which he has met with from the hypodermic injection of carbolic acid in seventeen cases of sciatica, lumbago, cervico-brachial neuralgia, pleurodynia, and muscular pains. Pains which may have lasted for weeks or months are soon relieved, sometimes by a single injection, and at others by four or five, and never requiring more than nine injections. The usual dose was three centigrammes, but in obstinate cases this was doubled or trebled; and Dr. Schrumpf believes that much larger doses may be employed with impunity. He has never found any ill-effect result from the injections, but they are only useful in idiopathic neuralgias, and not in those which are due to spinal disease, compression of nerves, or deeply seated varicose swellings.—*Medical Times and Gazette*, June 16, 1883.

Removal of Tumors of the Bladder.—At a late meeting of the Royal Medical and Chirurgical Society, Sir Henry Thompson reported his experience in the surgical treatment of tumors of the bladder, comprising now in all twelve cases (see The Medical News, Feb. 24, 1883, p. 215). The history, treatment, and histological examination of each of these were given in detail. The total result had been that, out of twelve cases, there had been seven recoveries, more or less partial, and five deaths, In nine cases, the age of the patients was over fifty. In malignant tumors, painful micturition had generally been the first symptom; in innocent tumors, hæmaturia had come first, and pain, if any, later. It had been frequent to find a little florid blood passed at the end of micturition only. Microscopical examination of the cells and fibres to be found in the urine had proved very valuable, though there were some points on which the observer was liable to be deceived; in some cases, villous processes could be found in the urine, and by these the diagnosis was rendered certain. In three cases, calculi had been found to coincide with papillomatous growths, which favored the theory that the papillomata were the result of local irritation. In many cases, only a part of the tumor had been removed; but the author did not consider such cases as by any means necessarily unsatisfactory, for the cicatrization thus produced often led to contraction and consolidation of the remainder. In the hospital-museums of London, there were about one hundred specimens of vesical tumors, which the author had inspected; and of these, as far as he could judge, about sixty were innocent and forty malignant. The label "cancer" he considered to have been too frequently used on the specimens. Out of the sixty cases of innocent tumor, about thirty or thirty-five, as far as could be estimated from their present condition, seemed to have been such as could have been removed, at least in part, by the author's method; and he wished it to be continually borne in mind that any successful operation would have been a clear gain from an otherwise inevitable death; for, without the aid of art, such cases invariably bled to death—some of them needlessly.

Mr. Marshall asked whether his experience of cases, in which no tumors were found on exploration, had furnished him with any certain clue to their diagnosis before operation.

Sir Henry Thompson, in reply, said that the conviction was growing upon him strongly that there were many such cases as would justify operation which were not discovered, or in which operation was not attempted. He considered that cancerous cases should be eliminated by diagnosis before operation, and no operation attempted upon them, but that of the remainder, about one-half could be healed. He started from the hypothesis that all cases of vesical tumor would be fatal, sooner or later, by their hemorrhage or their malignancy, and therefore he regarded operation as the only possible method of cure. Of such cases and method of treatment, he admitted that three years ago he was comparatively very ignorant. Their most frequent history was that they came first under the care of a physician for hæmaturia; then, after a time, pain followed, and a surgeon was called in; he sounded the case, and found no stone; the case passed on to another surgeon, who sounded again without finding stone; the hemorrhage was sometimes supposed to be renal, and the patient was sent back to the country to die slowly of this chronic hæmaturia. That was one reason why so few specimens were to be found in the museums compared with the frequency of the disease. He had himself opened twenty-seven bladders in exploration, and had found only twelve tumors; but he considered that a very good result, for the results of the simple wound, when the neck of the bladder was not cut through, were very slight, and the wound healed rapidly. Four or five years of painful symptoms which were not clearly explicable on any other hypothesis certainly justified an exploratory incision. He had considered the use of nitric acid, and had come to the conclusion that it would do more harm than good.

In two cases in which he had operated for papilloma, he had found a second operation on the remainder of the growth desirable, and that had given him the opportunity of placing his finger on the scar of his previous operation, and of finding that part of the coat of the bladder quite healthy. The mode of operation was admittedly difficult, and he showed many forms of curved and lateral forceps which he had found to give him much greater command of the whole surface of the bladder. He had never attempted to insert the forceps whilst his finger was in the bladder, for he considered that that would almost inevitably injure the neck of the bladder severely, and that was the point which he considered of the greatest importance to avoid, as rendering the healing of the wound very much more dangerous and lengthy.

He described the plan he had found most successful—viz., to insert the forefinger first through the urethral incision, and make a complete examination of the interior of the bladder, so as to feel familiar with the exact position and size of any tumor present; then quietly to withdraw the finger and insert the forceps, guided only by the knowledge he had acquired, and make a decided nip with it with little or no traction; then to withdraw the forceps, reinsert the finger, and remove, if necessary, with the finger-nail, anything that the forceps left incompletely divided. It was often best to leave the detached pieces of the tumor in the bladder for the moment, and remove them all at the end of the operation by the lithotomy scoop. If too much infrapubic pressure were employed, it made the depressed portion of the bladder feel like a tumor; this he attempted to avoid by keeping up the bladder-wall with a ball-probe alongside the forceps, but he was bound to admit that in one case the wall of the bladder had given way after an operation.—*British Med. Journal*, June 16, 1883.

Hysterectomy.—M. Terrillon has successfully employed Schrœder's proceeding, which consists, after removing the tumor, in taking a V-shaped piece from the uterus, bringing the two branches together by means of sutures and then uniting the tendons of the section. It is very necessary that the peritoneum be comprised in the sutures, and that no shred of peritoneum should rest in the wound. M. Terrillon prefers deep sutures. By these the uterine cavity is closed, and there is less danger of septic poisoning. This differs from the old method, in which the pedicle is left in the wound. After the V-shaped piece is removed the uterus is bound by the Cintrat serre-nœud, which prevents hemorrhage. This is removed when the sutures are put in place.—*Journal de Méd. de Paris*, May 19, 1883.

A Successful Case of Removal of a Large Spleen.—A successful case of removal of the spleen in leukæmia, by Fernando Franzolini, of Turin, is recorded in the *Wiener medicinische Wochenschrift*, No. 20. The patient was a pale, delicate woman, twenty-two years of age, who worked in a match manufactory at Paderno. From childhood she had been sickly, and since the age of seventeen menstruation had been irregular, and at times she had suffered from hysterical symptoms. She had never lived in a malarial region, and had never suffered from intermittent fever. In the beginning of the year 1879, without any assignable cause, she began to suffer from severe pain in the left side of the abdomen, which was increased on standing and on pressure. In July, 1880, a splenic tumor of considerable size could be made out, and in January, 1881, an increase of the white blood-corpuscles was noted. The patient was anxious to submit to an operation with the object of obtaining relief, and was admitted into hospital. On admission, the skin and mucous membranes were very pale; there was no œdema, and no enlargement of glands. A tumor could be detected in the left side of the abdomen, which felt elastic, but the boundaries of the tumor could only be ascertained with difficulty. The dulness extended in the long axis twenty-four centimetres (nine and one-half inches), in the transverse axis twenty-seven centimetres (ten and one-half inches). The white blood-cells were five times more numerous than normal. There was no albumen in the urine.

An incision was made along the linea alba to the left of the umbilicus, twenty-two centimetres (eight and one-half inches) in length. The coils of intestine and the large omentum which presented were protected by warm water compresses, and the spleen, with the help of the assistants, was pushed out of the wound. On account of the shortness of the pedicle in the floor of the peritoneal cavity, it was found necessary to place a double silk ligature on the splenic artery, which was the size of the forefinger, and on the vein, which was the size of the thumb. The gastro-splenic ligament included in two ligatures, and the diaphragmatic in one ligature, were divided. The patient lost scarcely a spoonful of blood. The operation lasted eighty minutes. The spleen measured in length 26 centimetres (10¼ inches), in breadth 16.5 centimetres (6½ inches), in thickness 7 centimetres (2¾ inches), and weighed, after removal of 300 grammes (9 ounces of blood), 1526 grammes (52 ounces). Notwithstanding an attack of pleurisy on the left side, accompanied by severe pain and fever, which lasted eight days, the wound healed, and the patient is now perfectly well with the exception of severe uterine pain at the menstrual period. The white blood-cells diminished gradually, and an examination of the blood in January, 1882, four months after the operation, showed almost a normal condition.—*Medical Times and Gazette*, June 9, 1883.

Jequirity in Granular Lids.—Dr. W. A. Brailey reports three cases successfully treated with this new drug, and gives the method of preparing it for use. The seeds, which are extremely hard and tough, are first broken and freed from their shell. They are infused for two hours in cold water, in the proportion of one to fifty; by this time they are so softened as to be easily pounded up, after which they are soaked in the same water for twenty-two hours more. The solution now requires only careful filtration to be ready for use. It is applied to the everted lids, or, when this is impossible, between the lids, thrice daily, till a severe conjunctivitis, of a purulent or diphtheritic type, is produced. He appends a brief summary of certain cases, which may indicate, to some extent, the relative value of this and other methods of treatment. Though it does not, in ordinary cases, immediately destroy all the granulations, it diminishes very considerably the pain and photophobia, and has a decided influence in clearing the cornea. Nor does it appear to affect this tissue injuriously, in which respect we must admit it to be decidedly superior to inoculation from cases of ophthalmia neonatorum. At first, he had considerable hesitation about introducing cases of inoculation with jequirity into the general eye ward; but he has not found that it makes any difference to the progress of other cases, whether operative or not. Though precautions against contagion have naturally been taken, he has not succeeded in inoculating into the sound eye the ophthalmia produced by this agent.—*British Medical Journal*, May 19, 1883.

Iodoform as an Anthelmintic.—Dr. Schildowsky has found that iodoform is a powerful anthelmintic against nematodes. He has used it in three cases with such success, that he believes himself authorized to recommend it. The dose for an adult is gr. j of iodoform mixed with grs. x of bicarbonate of soda. Of course, the dose for a child must be proportionately small.—*Journal de Méd. de Paris*, June 2, 1883.

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BEFORE OR AFTER MEALS?

SUCH is the question often asked of the doctor, but the answer is not always ready. Are there any rules by help of which the decision may be rightly made? One great principle will serve for the disposal of many kinds of prescriptions—that an organ in a state of irritation must be shielded, as far as may be, from the action of irritants. Medicines that are irritating should be given after meals, when the stomach is full, unless the chemical changes which must then occur will destroy their qualities. Mineral remedies, as the salts of copper, zinc, iron, and arsenic, should be given after meals, unless local conditions require their administration in small quantity before meals. Of the latter, arsenic affords a capital illustration. Large doses, acting as an irritant, should follow food, which protects the mucous membrane in a double capacity, but small doses, intended to act on the stomach terminals of the vagi, must be given when the organ is empty. Chemical reasons, also, influence the question of the time for administering mineral irritants. Thus, oxide and nitrate of silver, intended for local action, should appear in the stomach during its period of inactivity, lest, at other times, chemical reactions destroy the special attributes for which these remedies are prescribed. Iodine and the iodides further illustrate this point. Given on an empty stomach they promptly diffuse into the blood, but if digestion is going on, the acids and starch form products of inferior activity, and thus the purpose which they were intended to subserve is defeated.

Substances prescribed to have a local action on the mucous membrane, or for prompt diffusion unaltered, are preferably given before meals. It should not be forgotten that the liver is a great sieve, which retains in its structure for a time, and then excretes, many noxious substances; hence it is, in part, that the subcutaneous administration of many remedies is more effective than the stomachal. The condition of the stomach veins after meals is such as to lessen the activity of diffusion of poisons, and hinders their passage through the liver. It follows that active medicaments in doses near the danger line, are more safely administered after meals.

Probably the most important questions connected with the period of administration of remedies, are those affecting the acidity and alkalinity of the blood and urine. When shall acids and alkalies be given, before or after meals? Here we have to deal with chemical facts that afford small opportunity for differences of opinion, and yet how diverse the views of practitioners; how much more diverse the practice. They must be considered separately.

First, as to acids. When acids are prescribed with the view to check the excessive formation of the acids of the gastric juice, when should they be administered? A moment's consideration given to the laws of osmosis will decide this question. As the blood is a compound fluid with an alkaline reaction, but which furnishes to the gastric glands the materials for an acid secretion, it is obvious that an acid taken into the stomach before digestion begins, will determine, by the laws of osmosis, a flow through the intervening membrane of the alkaline constituents. Hence, when there is an excess in the formation of the acid constituent of the gastric juice, an acid may be given before meals to check the osmosis stomach-ward of the acid-forming materials.

When the alkaline condition of the blood and urine is alike in excess, when shall acids be administered? Obviously in the interval between the digestive acts; for then—the stomach being empty, and the veins flaccid—the most favorable conditions for the diffusion of acid into the blood exist. An alkaline fluid—the blood, on one side of the animal membrane, and an acid fluid, the medicament, on the other, are the conditions most favorable to osmosis. Then the acid diffusing into the blood, and out again from the kidneys, changes the reaction of these fluids from alkaline to acid.

Alkalies require different handling. When an excess of acid exists, as during the progress of digestion, how may alkalies be used? It is a matter of quite common observation that an alkali, as the sodium bicarbonate, will quickly relieve the excess of acid by neutralizing it; but it is equally true, although not as clearly recognized, that the relief thus purchased is at the expense of a continually increasing recurrence of the same malady. It may then be affirmed, as a rule of practice, that the habitual use of alkalies to relieve an excess of acid is unwise and hurtful.

Alkalies are used to increase the formation of acid, when the gastric glands perform this duty inadequately. An alkali given before meals diverts to the gastric glands, by the laws of osmosis, those materials in the blood out of which the acid constituent of the gastric juice is elaborated.

There are two periods when alkalies may be used to lessen the acidity of the urine: just before meals—when the acid-forming materials in the blood diffuse into the stomach glands, and the alkaline medicament diffuses into the blood and outwards into the urine; and after digestion is completed—when the alkalies diffuse directly into the blood, without interference from the contents of the stomach.

The effect of the remedy on the stomachal digestion, must, also, be taken into consideration in deciding on the time for its administration. For example, an alkali taken during the time when the reaction of the stomach juices should be strongly acid, must necessarily hinder, if not arrest, the digestive process for the time being. The metallic salts—notably corrosive sublimate—alcohol, tannin, and some other agents impair or destroy the ferment, or digestive power, of pepsin. Whenever, then, it is necessary to preserve the integrity of the stomachal digestion, the administration of the offending substance must precede or follow the meals at a sufficient interval.

Again there are remedies, which should be given with the meals, such as food adjuncts, and medicines required in the process of tissue construction. Wine that is intended to act as a food, is most beneficial when taken, slowly, during the course of the meal. The objection above stated as regards the ill effect of alcohol on pepsin, is not applicable here, except to the stronger spirituous wines, in large quantity—for the ordinary medicinal wines do not have sufficient alcoholic strength to injure this ferment. Iron, phosphates, cod-liver oil, malt, and similar agents, should, as a rule, go with food through the digestive process, and with the products of digestion enter the blood.

It follows from the foregoing considerations, that the relation of medicine-giving, to food-taking is not merely a question of taste or convenience, or expediency. There are rules capable of exact application, and hence the administration of any medicament may be accurately adjusted to the requirements of the function of digestion.

THE ABORTIVE TREATMENT OF INFECTIOUS DISEASES.

May we ever expect, by internal remedies, to combat successfully those invisible enemies of the human race, which we, at the present day, regard as among the lowest vegetable organisms? Such is the question asked by Prof. Binz, of Bonn, in opening the discussion on the above subject at the recent Congress of German Physicians at Wiesbaden. Those who are familiar with Prof. Binz's experiments (*Centralbl. f. d. med. Wissensch.*, Berlin, 1867) on the action of quinine upon the lower forms of protoplasm, can readily anticipate his answer. In his opinion, we dare not negatively answer this question if a single example can be found of an agent possessing these properties, and he says that we have not only one, but five remedies by which we can reach and render abortive certain causes of disease identical or analogous to the organisms referred to, viz., quinine, mercury, iodine, arsenic, and salicylic acid. Assuming the parasitic origin of malarial fever and reasoning from his experiments which prove the destructive influence of quinine upon vegetable protoplasm, he comes to the conclusion that quinine cures intermittent fever because it destroys the morbific organism in the blood. He brings to bear other facts to prove this proposition, some of which, relating to the culture of the malarial fungus and the effects of quinine upon it, have already been detailed in these columns. For others we must refer our readers to the *Deut. med. Wochenschr.*, of May 2d, where the paper is published. One other fact may be mentioned—all remedies which have heretofore been employed with success against malarial fevers possess antiseptic properties to a greater or less extent. They include quinine, arsenious acid, eucalyptol, beberin, carbolic acid, the sulphites, iodine, and ethereal oil of mustard—quinine being the most efficient, because of the greater tolerance of the nerve-centres towards it.

Similar is the action, according to Binz, of salicylic acid in rheumatism and relapsing fever, of mercury in syphilis, and of iodine in the gummy nodes of the latter disease. We possess as yet no parasiticide for the fungus of tuberculosis and diphtheria, but in this respect we are in the same position we were in relation to malarial fever, syphilis, and acute rheumatism, before the specific properties of quinine, mercury, and salicylic acid were discovered, and there is no reason why we may not still find the coveted parasiticide.

These views of Prof. Binz received no contradiction, and the co-reporter, Prof. Rossbach, of Jena, was confident that such abortive remedies as those referred to, exist for other diseases, and we have only to seek for them systematically to find them. In his judgment the action of salicylic acid and benzoic acid in rheumatism are as certain as that of quinine in malaria, although he admitted that the lower organisms lying at the root of these affections had not yet been discovered. At the same time, their infectious nature is disputed by none.

In marked contrast with the above was a discussion on an allied subject, and held almost simultaneously—that at the Academy of Medicine in Paris upon the treatment of typhoid fever. This was really a report of the results of experience in the treatment of the disease, and not a discussion involving an attempt to establish a theory or doctrine. Both methods are essential to the progress of medical knowledge, and they illustrate also, perhaps, the present bent of thought of the nationalities which they represent.

One member of the Academy had used quinine, another purgatives, another cold baths, another salicylic acid, another digitalis, etc. The participants were all eminent men and of large experience, including MM. Jaccoud, Hérard, Dujardin-Beaumetz, Hardy, and Sée, and their remarks abounded in much practical good-sense.

To the impartial examiner of these reports there is but one conclusion to be reached, and it is that there is as yet no specific treatment for typhoid fever, and that any of the so-called specific measures, whether by cold baths, sulphate of quinine, the antiseptics, or any other remedy, if exclusively relied on, may be not only useless, but harmful and dangerous. The method which recommends itself most to the practitioner of intelligence and experience may be characterized as the *armed-expectant* plan, in which a rigid hygiene and carefully selected diet are secured, as well as a control of all symptoms as they become exaggerated,—colliquative diarrhœa by opium, high temperature by refrigerants and antipyretics, constipation by suitable aperients, debility by supporting measures, etc.

THE GERM OF YELLOW FEVER.

The Department of State has received from Rio de Janeiro an extract from a report by Dr. Domingos Freize, a distinguished physician of Brazil, on an investigation into the nature of the yellow-fever poison. Dr. Freize recognizes in the blood of yellow-fever patients a cryptococcus, to which he has given the specific title of *zanthogenicus*. In the phases of its development it appears as minute points, or as large round cells with grayish or fringed margins, and bright transparent centres. Besides these there are occasionally seen transparent granulations, aggregated in a yellowish matrix.

A gramme of blood charged with these organisms, from a yellow-fever patient, was injected into the veins of a rabbit which died in a quarter of an hour with tetanic convulsions. At first it was suspected that some accident had caused the death of the animal, such as air getting into the vein, or some clot, but in either of these events death should have been sudden and unaccompanied with the symptoms mentioned. At the autopsy visceral congestions were found similar to those seen in persons dead of yellow fever, and the blood was found to contain the cryptococcus which was present in that which had been inoculated.

A gramme of the blood of this rabbit was injected hypodermically into a guinea-pig. which died at the end of some hours. Its blood was found to contain an extraordinary quantity of the cryptococcus. A second guinea-pig was inoculated by hypodermic injection with the blood of the first one, and after some hours the animal appeared feverish and oppressed, with cold ears and paws, trembling, and blackish vomiting. It died in a short time, and its blood showed an infinity of the characteristic organisms.

Dr. Freize considers that these experiments establish the parasitic nature of yellow fever, and that the parasite is the C. xanthogenicus found in every undoubted case of the disease.

He has also discovered and isolated an alkaloid from the black vomit, which he regards as a product or excretion from the microbes. He considers that the color of black vomit is not due to altered blood, but to the cryptococcus. He regards cemeteries as perennial foci of the disease. Some earth was taken from the grave of a man who had been buried the year before. A guinea-pig shut up in a confined space with this earth died in five days. Its blood was literally crammed with the cryptococcus in various stages of evolution; its urine was albuminous, and its brain and intestines yellow with the peculiar pigment of the microbe.

IODINE AND MALARIAL FEVERS.

In the issue of *The American Journal of the Medical Sciences* for July, we find a careful and logical analysis of seventy-six cases of malarial fever treated with the tincture of iodine by Drs. Atkinson and Woods, at Bayview Asylum, Baltimore. The bald facts are, that of seventy-six cases so treated, only sixteen were cured, and in respect to these cures, some doubts may be entertained. As the authors of the paper show, very different, and far more encouraging reports have been put forth from time to time in regard to the antimalarial activity of iodine. Why should such a discrepancy exist? The explanation is to be found, doubtless, in the old source of error—mistaking the *post hoc* for the *propter hoc*—and in the simultaneous administration of remedies, the curative result being ascribed to the wrong one.

Although it may be shown that iodine is not effective as against the paroxysms of intermittent and remittent fever—that it has but little antiperiodic power—it can hardly be doubted that it does remove certain of the morbid products of malarial action. One of the greatest embarrassments experienced in the treatment of intermittent fever, is the prevention of subsequent relapses: partly due to the slow multiplication of the germ, but largely to the structural alterations induced by the preceding seizures, the paroxysms return. Iodine here renders a most important service by removing the changes in the liver and spleen, the pigment deposits, etc. It follows, that quinine having far greater antiperiodic power, is the appropriate remedy to arrest the periodical seizures, whilst iodine should be utilized to remove the products of the infective processes. During the interval between the attacks, iodine, especially iodide of ammonium, should be given in small doses at short intervals, so as to insure diffusion into the remotest anatomical elements.

There is still another point of view from which the administration of iodine in malarial diseases is to be regarded. It is a capital expedient for relieving the excessive irritability of the stomach which, in not a few cases of acute malarial poisoning, interfered seriously with the administration of the antiperiodic. It must be given in small doses for this purpose—from one-fourth to one drop of the tincture at short intervals. Better results are had from a combination of iodine and carbolic acid under the same circumstances. Not only is the combination more effective in allaying gastro-intestinal irritability, but it has also decided antiperiodic power.

HÆMOGLOBINÆMIA AND HÆMOGLOBINURIA.

Under the above title, Ponfick discusses a condition of the blood in which the hæmoglobin is dissolved out of the blood-disk. He showed that a large number of substances possess the power, when injected into the blood, of dissolving the red blood-corpuscles. Among them are the bloods of other species and numerous poisons. The substances in question may, on the one hand, so act upon the blood as to destroy the affinity between the coloring matter and the stroma of the corpuscle, breaking up the latter into innumerable smaller fragments, such being the action of heat and cold (freezing). Or, if it be chemical agents, the stroma of the corpuscle may remain as intact but invisible bodies (Norris' invisible corpuscles?).

An important symptom of such solution is the appearance of blood-coloring matters in the urine, which may, in consequence, be colored red, black, or dirty red. The urine contains hæmoglobin, but no corpuscles. The organism frees itself of the fragments of blood-corpuscles, first through the spleen, which is often quickly distended by them. The freed coloring matter passes first to the liver, and is largely separated with the bile. But to this separation there is a limit, and when it is reached, the coloring matter passes over into the urine.

Even a small quantity of this coloring matter, according to Ponfick, throws the kidneys into a state of great irritability; and the great danger of hæmoglobinæmia, according to him, is an obstruction of the uriniferous tubules, which may produce inflammation with a fatal termination.

Ponfick therefore makes three grades of hæmoglobinæmia: the first in which there is none in the urine, and which is therefore not recognizable; second, that which lasts from one to three days, which may terminate favorably if the tube-casts can be washed out of the uriniferous tubules by increased force of the heart's action, and which is, therefore, amenable to diuretic treatment; and, third, cases in which the tubuli are irremediably obstructed. There may also be in these hæmoglobinæmias high degrees of hæmotogenous jaundice. From facts adduced by Lietheim, Ehrlich, Schumacher, and Ponfick, there would seem to be some relation between syphilis and hæmoglobinæmia.

CYANIDE OF MERCURY IN ATROPHY OF THE OPTIC PAPILLA.

Galezowski maintains that he has often cured atrophy of the optic papilla, syphilitic in origin, by the subcutaneous injection of cyanide of mercury. He employs a solution containing five milligrammes of the cyanide in a gramme of water—about one-twelfth of a grain in fifteen minims. This he injects into the temporal region, daily. If the dose be much increased above this amount, there is danger of inducing an obstinate diarrhœa.

In the course of the discussion on these observations, Rabuteau held that the efficacy of the injection proposed by Galezowski was due to the mercury, and that the cyanogen, so far from contributing to the curative result, was a positive hindrance, because its activity as a poison limited the quantity of mercury which could be administered in this form. Galezowski replied to this in the usual terms. When a practical man's observations are opposed by some scientific statement, he is apt to observe, as Galezowski did to Rabuteau, that no chemical theory is of any value as opposed to practical experience.

REVIEWS.

The Medical and Surgical History of the War of the Rebellion. Part III., Vol. II. Surgical History. Prepared under the Direction of Joseph K. Barnes, Surgeon-General, U. S. A. By Geo. A. Otis and D. L. Huntingdon, Surgeons, U. S. A. 4to. pp. xii. 986, xix. Washington: Government Printing Office, 1883.

With this volume, the Surgical Series of the History of the War is completed. Just how much of it is due to the lamented Otis, and how much to Dr. Huntingdon, is not stated, but the latter pays a justly due compliment to his cultivated and able predecessor, and it is no little praise to say that the work does not seem to have suffered by its completion by different hands from those that laid the foundations so wisely and so well.

After completing the systematic consideration of gunshot wounds by a chapter on the wounds of the inferior extremities, the authors have considered miscellaneous injuries; the complications of wounds, such as ligations, tetanus, wounds of nerves, gangrene, erysipelas, and pyæmia; anæsthetics; and conclude with two chapters on the medical staff and the materia chirurgica, and the transportation of the wounded.

The wealth of material at their disposal has been something marvellous, and no less so the painstaking care and exactness with which it has been utilized. The reader will be struck with the minuteness of detail and the thoroughness with which the subsequent histories of many of the patients have been obtained by correspondence and by research in the Pension Office. The illustrations are both numerous and splendid. Over five hundred wood-cuts and forty beautiful plates, many of them chromo-lithographs, adorn the volume.

To analyze the work, is impossible in the limits of this brief notice. No surgeon can well afford to be without a copy of the work. No surgery will be written within the next century without reference to its facts and figures. *Monumentum ære perennius* must be written upon it. It reflects the greatest credit on its authors and the intelligent liberality of the government that has produced it.

SOCIETY PROCEEDINGS.

MAINE MEDICAL ASSOCIATION.

Thirty-first Annual Meeting, held at Portland, June 12, 13, and 14, 1883.

(Specially reported for The Medical News.)

June 12th, First Day, Morning Session.

The meeting was called to order by the *President*, Dr. George E. Brickett, of Augusta.

Dr. F. H. Gerrish, of Portland, presented a biographical sketch of Dr. Alexander Ramsey, prepared by Dr. George P. Bradley, U. S. N., in 1877.

THE REPORT OF THE TREASURER,

Dr. A. S. Thayer, exhibited an unusually prosperous condition of the Association; notwithstanding the fact that large expenditures have been made, careful management has established the treasury upon a firm basis during the past five years, and has accumulated to its credit a balance of between six and seven hundred dollars.

The Association made a tardy recognition of its duty to its Treasurer, who has served without any compensation, and under a bond, by adopting a standing rule providing for a yearly salary.

A committee was appointed to provide for a Society banquet at the session of 1884.

Dr. S. C. Gordon, of Portland, exhibited a photograph of an

APPARENT HERMAPHRODITE,

whose development on the right side, as seen in the portrait, was unmistakably feminine—long hair, smooth face, and mamma of average size; on the left side the hair was short, a moustache adorned the left half of the lip, and the left side of the chest was flat and covered by a thick growth of hair.

In reply to a question, Dr. Gordon stated that he knew nothing of the appearance of the sexual organs, never having seen the person in question.

Dr. Stanley O. Warren, of Portland, reported a case of

ABSENCE OF THE UTERUS

in a woman twenty-five years of age. Patient always healthy. English descent. First appearance of menstrual blood when eighteen years old; only enough to stain the linen. This was not again present for several months. She thought it came from the vagina. Since last menstruation (?) there has been bleeding at irregular intervals from the rectum, but never enough to be called a flow, only sufficient to soil the linen, and lasting but a day or two.

Married at twenty-one. Intercourse painful, and only accomplished after long and repeated attempts. Half an hour after entrance was effected, there occurred from the vulva a free discharge of dark clots, continuing for three or four days. Sexual desire always present. Dorso-lumbar pains, with ovarian neuralgia and frequent attacks of congestive headache. Frequent severe epistaxis. Physical examination shows feminine development; external genitals normal; vagina, a simple cul de sac, an inch in depth, capable of being lengthened by pressure to admit the entire finger. There is no opening in the vault of the vagina, nor cicatricial tissue to indicate acquired atresia. Ovaries detected by rectal touch connected by a band of firm tissue, which may be a Fallopian tube or rudimentary uterus. No other pelvic organs discoverable by thorough rectal or bladder examination. She is making preparations for another marriage.

A CASE OF CYST OF THE ANTERIOR WALL OF THE VAGINA

was also reported by Dr. Warren. At the operation for its removal by Dr. S. C. Gordon, of Portland, it presented the appearance of a firm and tense tumor, below the base of the bladder, the size of a hen's egg, and having no connection with bladder or urethra. On making an incision a quantity of straw-colored serum escaped. Attempts to dissect away the cyst-wall, after dividing it in a line with the vagina, were ineffectual; the cavity was carefully mopped out with phenol, the upper portion sutured, and drainage established. It was doubtless a cyst of one of Gartner's canals. Further examination disclosed on the right of the vagina a false passage admitting the tip of the little finger, and in depth was two inches. Situated in the vesico-vaginal tissue, it may have been, at some period of life, a cyst like the one opened.

These cases are rare. A case similar, yet differing in one important respect, the cyst apparently communicating with the peritoneal cavity, was reported to the New York Obstetrical Society June 7, 1881.

Afternoon Session.

Delegates were received and welcomed from other medical societies.

The President delivered a short

ADDRESS,

referring to the rise of the Association from a humble birth, in 1853, at the Tontine Hotel, in Brunswick, the seat of the Medical School of Maine. Sixteen of the thirty-one gentlemen who have occupied the president's chair are dead. He expressed strongly his belief that the common welfare of the community demanded that the Maine Medical Association should be unremitting in its endeavors to secure such State legislation as will secure a State Board of Health and a medical registration law.

The question of new remedies and pharmaceutical preparation was recommended as worthy of original investigation.

The Code of Ethics of the American Medical Association was declared to be sufficient, and none too strong for rational, liberal, and intelligent physicians, who ought, above all things, to seek truth.

The report of the committee annually appointed to visit and report upon the Portland School for Medical Instruction was presented by Dr. O'Brien, of Bristol.

The Association then took up for consideration four

CONSTITUTIONAL AMENDMENTS,

two of which provided for such change in the rules for discipline as would remove delegated power from the Censors, and practically convert the Association into a Board of Trial. These were unanimously rejected. Those which provided for the creation of an Examining Board, in addition to the present Board of Censors, were indefinitely postponed.

Dr. Pierce, of Freeport, read a paper on

SYNOVITIS.

Prof. S. H. Weeks spoke of a specimen in the cabinet of the Medical School, which has a heavy chalky deposit not only upon the membrane, but encrusted upon the articular cartilages. In the chronic form, after tapping and application of elastic roller from toes to thigh, passive motion becomes as important as rest in the early stages.

Dr. A. K. P. Meserve, of Portland, read a paper on

ACUTE INFLAMMATION OF THE MIDDLE EAR,

considering the subject from the standpoint of the general practitioner. The rapidity with which tympanic inflammation goes on to effusion, suppuration, and perforation, often rendering it impossible to refer the case to the specialist, until great damage is done to the delicate structures of the ear, demands that the general practitioner should always be prepared to treat this painful and often dangerous affection.

The extreme delicacy of the anatomical relation and physiological adjustment of the several parts of the middle ear, will at once suggest an explanation of the fact that pain is such a prominent symptom of inflammation of this region of the ear, it being usually the first symptom to call attention to the disease. The pain is usually sudden in onset, and agonizing in character, passing rapidly to its height, and only ceasing with effusion or suppuration, or with perforation, of the drum-head. As causative agents, colds, dampness, furuncles in the meatus—the exanthemata especially—scarlatina, typhoid fever, pneumonia, hypertrophied tonsils, pharyngitis or nasopharyngitis, were mentioned.

The course of invasion is through the Eustachian tube; therefore, we should condemn as dangerous the use of the anterior nasal douche.

Inflamed and swollen gums during dentition are a frequent cause. When the hearing power is apparently more acute than normal during the early stages, it may be taken as an indication that the disease is chiefly confined to the membrane, not having involved the deeper structures.

The fulness and subjective noises in the head bear no direct relation to the severity of the disease; they are often absent. Perhaps cases in which these are prominent symptoms recover more slowly than when they are absent; the fever, ordinarily slight, sometimes raises the temperature to 103° Fahrenheit. The superficial or deep-seated redness of the membrana tympani will often enable the practised observer to determine the origin of the disease, though, if the dermoid layer be chiefly affected, the walls of the meatus are likely to be somewhat swollen, thereby interfering with a good view.

The ear should always be examined by the mirror and speculum, and by tests for hearing when practicable, either in child or adult, and especially in children when they awake with a start or scream, or seem disturbed by noises usually unnoticed. Convalescence from any serious disease, or one of the eruptive fevers, is an especial indication to explore thoroughly. By early treatment resolution is hastened, and the serious accidents possible may be averted.

Therapeutical measures for the relief of disease in other parts of the body are also applicable here. Local abstraction of blood by leeches from the region of the ear, and continued application of hot water to relieve pain, may be practised with good effect. The ear should be inflated through the Eustachian tube early in acute inflammation, and especially if there are redness of the throat and signs of extending inflammation therefrom.

The object should be rather to open the tube for the draining away of mucus, than to distend the membrana. A good method is to place one end of a rubber tube in the patient's mouth and the other in one nostril, closing the other nostril and directing the patient to blow through the tube. Paracentesis should be made as soon as demanded by bulging of the drum membrane, and the meatus kept dry with absorbent cotton, and the douche and inflation continued. The constitutional treatment is that demanded for all acute inflammations. Should the case be seen late, or go on to the purulent stage with perforation, the ear may be kept clean by douching with warm water and afterward carefully dried, and the Eustachian tube should be kept open, and the membrane gently brushed over with some mild astringent lotion, Zinci sulphatis gr. i–iij to water ℥j; if the perforation does not readily heal a strong solution of Argenti nitras gr. xl to water ℥j may be added; finely powdered acidum boracicum may be blown into the ear, and if subjective noises are troublesome, blisters may be applied to the mastoid region.

Dr. E. E. Holt, of Portland, said that more attention ought to be paid to this class of cases by the general practitioner; a great number of all diseases of the ear coming to the specialist were chronic in nature. When tested for hearing, the ears should be examined independently. He would not puncture unless he had sure knowledge of the presence of pus. In reply to a query, Dr. Holt said he would not, as a rule, inflate the Eustachian tube in acute inflammation.

Evening Session.

Dr. H. N. Small, of Portland, presented a paper on

EXTRA-UTERINE PREGNANCY.

He said that notwithstanding the fact that extra-uterine pregnancy has attracted during the past few years a great deal of attention; the natural history of this accident does not yet seem to be well understood.

In most cases the cause cannot be decided: the victim may be a primipara or multipara, and we are unable to give any exact explanation. Some light may perhaps be thrown upon the subject by past histories of pelvic inflammations, causing constrictions and displacements of the appendages of the uterus. The gravid sac *has* been found at the ovarian extremity of the tube, which at its uterine end was constricted as by a ligature.

Extreme uterine displacements may prevent the passage of the ovum through the Fallopian tubes. It is reported of a woman who in her first pregnancy underwent Cæsarean section, that becoming a second time pregnant, the child died in the eighth month, gastrotomy was performed followed by death on the tenth day. The unclosed incision of the previous operation was found in the anterior wall of the uterus, through which the fecundated ovum had escaped into the cavity of the abdomen, become attached and developed. Perhaps mental and moral influences may operate as causative agents; the freedom of the lower animals from this accident may be due to the fact that they do not become a prey to emotional disturbances.

Displacements of the ovum is much more frequent in the human female than among those of the lower animals, but that it is confined to the human species, facts disprove.

Some pathological condition of the sexual apparatus is doubtless the prominent cause of this unfortunate occurrence. We have also as causes diseases of the oviduct, temporary flexion, and the obstruction of the tube by mucus.

Apparently the age of the woman has no controlling influence, and by far the most difficult question in such cases is to locate the situation of the ovum. The relative frequency of the different varieties is difficult to determine. Lawson Tait recognizes only two forms. A bursting of the tube may allow the escape of the ovum, and its development may progress among the folds of the broad ligament; or the peritoneum may be also wounded, as well as the fœtal cyst, and the ovum received into the cavity of the abdomen. This is the view taken by other prominent authorities in America. They coincide in the view that the fecundated ovum may be arrested anywhere between the fimbriated extremity of the tube and the uterus, and even in that portion of the tube which passes through the uterine wall. Before the time of quickening, as a rule, the cyst ruptures, and death results from hemorrhage.

Dr. Holt then related the following history of a case of tubular pregnancy occurring in his own practice: In January, 1879, he was consulted by Mrs. T., multipara, for supposed uterine disease; menstruation had been irregular for several months. For six weeks she had not menstruated; was positive that she was not pregnant. Digital examination discovered softening of the os tincæ. Told her, he thought she was pregnant, and asked her to call again in one month. February 10, she had an attack of severe colicky pain, most severe in the left hypogastrium — violent, producing severe prostration. The next morning, she seemed all right again; pain absent, but some tenderness. February 18, a return of all these symptoms with alarming severity. At this visit, felt positive that he was dealing with a case of pregnancy of the left Fallopian tube. Was on the point of summoning counsel, when he was again called, on the 22d, found a new accession of pain in left iliac fossa, with metrorrhagia, all the symptoms of profound shock, and a hemorrhage, the amount of which the slight loss of blood per vaginam was by no means indicative. About two hours before my arrival she was sitting quietly, and suddenly felt as though something had been torn inside. It was now plain that it was tubular pregnancy, and that the cyst had ruptured. Reaction was secured by a free use of stimulants. The abdomen was visibly enlarged, and there was dulness on percussion. The uterus was pushed from its normal position by a mass behind, and on the left side it was a distinct tumor. Ordered opium and brandy *pro re nata*. The next morning, found acute peritonitis. Dr. A. S. Thayer, of Portland, saw the case in consultation. The patient lived about forty-eight hours. At the autopsy, twenty-four hours after death, the abdominal cavity was found to contain a large quantity of blood, with marked evidence of peritoneal inflammation; the left Fallopian tube was much enlarged, and at about two inches from the uterine end it contained a ruptured cyst, and hanging from it a three months' fœtus.

It cannot be expected that extra-uterine pregnancy can be always diagnosed without difficulty. The diagnosis in normal pregnancy is not always certain, unless we can count the beats of the fœtal heart; how much more difficult is it to locate the attachment of an ovum in a Fallopian tube or in the abdominal cavity.

The prognosis of misplaced conception is always grave; the tubal form most fatal, the ventral most favorable. Tubal rupture of the cyst almost always occurs at the third month.

In the present state of abdominal surgery if the diagnosis be positive, there is no reason why we may not operate to advantage and remove the cyst. If the cyst has ruptured, it seems there is but one resort, and that of but little promise—to cut down, ligate the bleeding vessels and perhaps remove the cyst. Certainly we ought to give the patient the benefit of all measures, even the most extreme when the probability is only certain death.

DR. S. C. GORDON believed that we could not overestimate the value of bimanual palpation in establishing a diagnosis. He regarded Rockwell's method of electro-therapy the best treatment, and in failure of this, should unhesitatingly take the chance offered by abdominal section.

PROF. F. H. GERRISH gave a description of a specimen in the cabinet of the Maine Medical School. It is a fœtus contained within a calcareous mass, removed from the abdominal cavity of a woman who died at the age of 60, after bearing several children, subsequent to the symptoms which marked the development of this tumor during her early married life. Dr. Gerrish offered this as bearing upon the question of prognosis.

DR. MESERVE reported a case of death from peritonitis, following a train of symptoms pointing to extra-uterine pregnancy. No post-mortem could be obtained.

Cases in which the occurrence of the accident was discovered at post-mortem, were reported by Drs. Hutchinson and C. G. Adams.

DR. S. H. WEEKS, Professor of Surgery in the Medical School of Maine, presented a verbal communication on the

NATURE AND TREATMENT OF FRACTURES ABOUT THE ELBOW-JOINT.

The different varieties were indicated by specimens, and their treatment illustrated by the exhibition of several pieces of fracture apparatus. That advocated as fulfilling the greatest number of indications was an immovable angular elbow splint made from wood, tin, sole-leather, or gutta-percha. Early and judicious passive motion was as essential at the proper time as the fixed dressing.

DR. GORDON illustrated a method whereby constant extension might be made by a hinged wooden splint, binding upon the anterior surfaces above and below the joint, a stiff flat spring of metal or gutta-percha.

DR. GERRISH spoke of the necessity of treating certain forms of this class of fractures by straight position and plaster splints.

JUNE 13TH, SECOND DAY.

MORNING SESSION.

DR. O. A. HORR, of Lewiston, presented the report of the committee appointed to visit

THE MEDICAL SCHOOL OF MAINE.

The school and its interests were commended to the members of the profession, and a favorable report made of the work accomplished in the several Chairs. A change of location from Brunswick to Portland was urged, to be brought about as soon as practicable for the sake of the increased clinical advantages offered by the hospitals and dispensaries of the city.

DR. E. E. HOLT, of Portland, read a paper upon

DISEASES OF THE MASTOID,

in which he gave the statistics of forty cases from private practice, in two thousand cases of diseases of the ear, showing that the left ear was involved three times as often as the right. The treatment was embrocations, hot-water poultices, leeches, Wilde's incisions, and perforation of the bone according to the indications. As regards results, twelve males and six females were recorded as cured, four each as "improved," "unknown," "not treated," and "died." Seven remained under treatment. In two cases of death, the purulent condition was such that nothing was done. In one, an operation was advised, but refused, and the patient died after exhibiting cerebral symptoms. In the other case, the disease came on in the latter part of pregnancy in connection with acute suppuration of the tympanum, and in the absence of pronounced indications for opening the mastoid, or even using Wilde's incisions, operative interference was deferred until a prominent swelling appeared at the root of the zygomatic process, when an incision liberated pus and revealed a rupture of the bone; a fatiguing gestation, difficult labor, exhausting inflammation and suppuration of the tympanum and mastoid brought on a fatal termination.

Several preparations of the temporal bone were exhibited, showing the anomalous course of the lateral sinus, and indicating the care necessary in drilling this bone. Several sequestra removed by operation were shown, and a part of the cochlea which had ulcerated away in connection with mastoid disease, the patient making good recovery.

DR. A. H. BURBANK, of Yarmouth, read a paper on

THE INDUCTION OF PREMATURE LABOR

for those cases in which, if allowed to go on to the full term, it is reasonably sure that delivery must be effected by craniotomy, or version, or abdominal section. It is demanded when there is a conjugate diameter of the brim so small as two and one-half to three and one-half inches. When that diameter does not exceed two inches and one-half, or two inches and three-quarters, the time of operating must not be later than the end of the seventh month. The operation should not be deferred beyond the end of the eighth month when the conjugate diameter is not more than three inches and a half. Rare and exceptional cases may require it before this period, but it would then be resorted to wholly in the interests of the mother, and with but a faint hope of saving her offspring.

Manual and instrumental methods of pelvimetry were compared, the necessity for the obstetrician to gain all possible information from his patient as to any history of defective ossification, and the character of previous labors, if a multipara, was insisted upon. Two cases were detailed in which, by his method, the Doctor had safely delivered in the one case two children now living, one at seven, the other at seven and a half months of pregnancy; craniotomy having been performed in an earlier labor. In the other case, a child, now living, was delivered at seven months and three weeks. This patient had previously been delivered by perforation in her first, and by forceps at seven months in her second and third pregnancies, of living children, both of which survived for a few weeks.

The method of procedure was then detailed as follows: "Directing the patient to lie upon her left side, I strongly depress the uterine globe, with the right hand upon the fundus uteri, while I pass the index finger of the left hand through the os. Then, with the finger slightly bent and its palm towards the symphysis pubis, I steadily draw the cervix in that direction, and expect, in a half hour, to have a dilatation the size of a half-dollar or more. Some labor-pains are generally caused by each attempt to dilate, but they will soon cease. Deeming it unfortunate for labor to be induced before thorough dilatation and dilatability are secured, and for reasons to be hereafter given, not expecting or desiring labor to follow for some days, I leave the case for twenty-four hours, and at the next and at subsequent visits the os is more easily reached (always with the left hand), and I am able to effect further dilatation by drawing the os toward the symphysis, first with one finger and as soon as I can with two and three fingers; or after three attempts at dilatation, two fingers in the os can be separated from three to four inches, and sufficient dilatation has been secured to warrant inducing labor-pains. I have then given somewhat less than a fluiddrachm of extract of ergot, each five hours until labor has commenced. If at the end of twenty-four hours labor is not induced, it has been sufficient to increase the dose to one drachm at the same intervals. For this purpose, and administered in this way, ergot has seemed an available agent and entirely safe for mother and child."

In explanation of these methods it was insisted that their value lay in a very *slow* and *patient* use of means in the preparatory stage.

With respect to the use of bougies, and the practice of allowing them to set up uterine action by remaining in the uterus some specified time, the writer could not appreciate the advantage of uterine action before dilatation, rather than after it.

Artificial dilatation, as described, is a comparatively painless operation; over other methods it has the advantage of being as fully efficient, less painful, does not confine the patient to her bed beyond the half hour in each day required for the operation, and permits her to be about her ordinary employment until labor begins.

In exceptional cases (puerperal eclampsia), when the saving of time is an element, a more rapid and persistent manual dilatation aided by Barnes' dilators is effective.

The time occupied by Dr. Burbank in inducing labor, has been from two to four or five days. This length of time is to be preferred, for in an unnatural process the tissues are taken by surprise and the operator must accommodate himself to them; hence, it is better to be satisfied with a good result even if arrived at slowly. After the initiatory steps in dilatation have been effected, a change in the vagina, vulva, and perineum will be appreciable, and the difference between the termination of this induced labor, and one conducted by nature will be slight.

Experience has shown no danger to the mother in eleven operations; in each case, except one delivered by forceps, the labors have been short, without accident, and in all respects natural. The convalescence has been invariably, speedy, sure, and without apparent danger.

The same assurance of safety cannot be bestowed upon the children. Of eleven born permaturely, ten were born alive; of this number, one which came at six and a half months lived but three days; seven of the remaining nine were born at seven months and over, and are now alive. Extra care should be bestowed upon these prematurely born children; thick wraps of cotton should be prepared for enveloping them, and the usual ceremonies of washing should be dispensed with; the limbs should be often examined, and if necessary, exposed to heat from an open fire, stove, or register; washing ought to be prohibited until the child shall arrive at that age at which it would have been born; instead, daily anointing the whole surface with mild unguents, and removing gently portions thereof, must suffice for cleanliness. Till these immature infants cease to live upon borrowed time, they must be kept enveloped in the cotton wrap.

DR. MITCHELL, Prof. of Obstetrics in the Medical School of Maine, agreed as to the value of manual dilatation, as a means of inducing labor, but preferred the insertion of a bougie to ergot; he would especially recommend Dr. Burbank's method in *all* cases of placenta prævia, and had seen a case of obstinate chorea, in a pregnant woman, relieved and cured by this procedure.

DR. GORDON saw serious objections to such manual interference with the cervix, and condemned the use of ergot as dangerous to mother and child in first and second stages of labor, and uncalled for in the third stage, unless for hemorrhage.

DR. J. T. DANA gave an interesting review of the several forms of

BRIGHT'S DISEASE,

considering pathology and symptomatology and treatment of those conditions known as tubal nephritis, amyloid kidney, and cirrhotic kidney.

PROF. MITCHELL, of Brunswick, believed that the prognosis of chronic Bright's disease is becoming more favorable. His success had been largely due to the milk treatment, and he had seen marked benefit from the use of chloride of gold in the cirrhotic form.

DR. PENDLETON reported a fatal case in which, at the post-mortem, a marked cirrhotic condition of the kidney was found, but the patient had exhibited no prominent symptoms except neuralgia of the orbit, a small amount of albumen, and a few casts, until a day or two before death; there was no œdema, no effusion.

DR. J. A. SPALDING, of Portland, read part of the testimony in a suit for malpractice in

A CASE OF INJURY TO THE EYE.

The plaintiff's eye had been destroyed by a thrust from a cow's horn, and (as the plaintiff maintained) so badly treated by the defendant physician, that sympathetic ophthalmia ensued and destroyed the sight of the other eye. The jury gave a verdict for defendant on the ground that an ordinary physician could not be expected to know all about such cases. The jury may also have been influenced by the opinion expressed by several medical men and specialists, that if the defendant told the plaintiff's friends of the danger of sympathetic ophthalmia and urged enucleation, he did his duty and ought not to be held responsible. The essayist then proceeded to examine the case in its various details, and to show briefly the generally accepted ideas of treatment and the indications for enucleation after injuries of the eye. Every eye that experience teaches us is liable to set up sympathetic ophthalmia ought to be removed at once.

Three cases of injury to the eye from a cow's horn were compared: in one, sympathetic ophthalmia destroyed the fellow eye; in a second, the sight was partially destroyed by sympathetic ophthalmia but was already improving rapidly when enucleation of the injured eye was made for the relief of exquisite pain; in the third case, the injured eye recovered excellent sight without treatment, although both iris and lens were thrust out, while the fellow eye was never sympathetically affected. These results in cases so similar, tend to show the extreme degree of doubt that must ever prevail in cases of injury to the eye. Every physician should therefore decide at once what he is to do, and if in doubt, consult the larger experience of the specialist.

AFTERNOON SESSION.

Drs. Ayer, of Boston, and Colony, of Fitchburg, delegates from the Massachusetts Medical Society, were introduced.

The Association then proceeded to the

ELECTION OF OFFICERS FOR 1883.

President.—Dr. O. A. Horr, of Lewiston.

Vice-Presidents.—Drs. L. W. Pendleton, of Portland, and D. E. Marston, of Monmouth.

Recording Secretary.—Dr. Charles D. Smith, of Portland.

Corresponding Secretary.—Dr. J. O. Webster, of Augusta.

Treasurer.—Dr. A. S. Thayer, of Portland.

Board of Censors.—Drs. H. N. Small, of Portland; W. K. Oakes, of Auburn; J. M. Bates, of Yarmouth; W. B. Cobb, of Standish; and J. D. Nutting, of Hallowell.

DR. M. C. WEDGEWOOD, of Lewiston, then delivered

THE ANNUAL ORATION,

his subject being *Rational Medicine and Quackery.*

Rational medicine was defined as a practice founded on reason; that system of practice which appeals to and which can be comprehended by our reasoning faculties. It discards all "pathies;" it refuses to admit or recognize any man who adopts exclusive ideas as to the theory of disease or methods of cure. It collects, systematizes, and utilizes every grain of truth, and conceals or treasures for exclusive use nothing. Quackery flourishes from an inherent weakness of the human mind; it is the stamp of ignorance and superstition, and belongs to all trades and professions. No field is so wide for its cultivation as that of medicine; and we find it practised by men who have diplomas and belong to reputable medical societies, as well as by pretenders. We offend against rational medicine by the practice of such habits as detract from the dignity and honesty of an honorable profession.

DR. B. F. STURGIS, of Auburn, reported a case of

CHRONIC ABSCESS OF THE TIBIA

relieved by perforating. Having broken the central pin of his trephine, the operator used a gouge and chisel, and evacuated pus from two cavities, one, two inches long and three-fourths of an inch wide, near the head of the bone, below the anterior surface; the other below, of about the same size, and separated from the first by a dense septum of bone. The cavities were washed out with carbolized water, and packed with oakum and balsam of Peru. Recovery was rapid and without unusual symptoms.

ABNORMALITY OF THE BLADDER.

DR. F. H. GERRISH, of Portland, reported a case in which the bladder was divided by a vertical septum into two nearly equal portions. A sound easily reached a stone in the posterior chamber, but a lithotrite with its shorter beak failed to reach it, slipping always into the anterior cavity. After prolonged efforts with the lithotrite on two occasions, lateral lithotomy was performed and the calculus extracted. The patient, though seventy-five years old, did not have an alarming symptom after the operation.

THE COMMITTEE ON THE PRESIDENT'S ADDRESS

reported, through the Chairman, Dr. S. H. Weeks, the following:

Resolved, That the sanitary interests of this State imperatively call for the establishment of an efficient State Board of Health.

In accordance with this resolution it was urged that a committee of three be appointed, with power to add to their number, and instructed to make all needful investigation and present the subject to the next Legislature with the request that such action may be taken as deemed best for the health and prosperity of the people of our State.

Resolved, That it would be for the interest of this Association to have presented at each annual meeting all advances made during the previous year in materia medica.

In accordance with this resolution we recommend the appointment by the Board of Censors of a committee on new remedies.

Dr. Horr, of Lewiston, a member of the last Legislature, gave some interesting facts with reference to the rejection of the bill to secure

MEDICAL REGISTRATION.

The bill had its origin in the Androscoggin County Medical Society. Physicians throughout the State were invited to coöperate to secure its passage. Everything seemed favorable at the hearing before the legislative committee; opposition came from eclectics and spiritualists through the country members. The bill was subsequently amended to a condition hardly better for the regular profession than no bill at all. It passed a second reading in the House, was amended in the Senate, then refused concurrence by the House; the Senate adhered to its action, and a State Legislature which has incorporated almost anything asked for in the way of hybrid medical colleges and bogus literary societies, strangled a measure which, if not in all respects perfect or satisfactory, would have been a step towards legalizing and protecting the honorable practice of medicine.

Evening Session.

Dr. S. C. Gordon, of Portland, read a paper on the

RESULTS OF SOME OF THE OPERATIONS FOR ACCIDENTS OCCURRING AT PARTURITION.

The points emphasized in this paper were:

1. The importance of operating for a definite purpose. The various accidents are sooner or later followed by certain well-marked symptoms, and unless the operations are performed with special reference to relief of such symptoms, the patient is not benefited; a mere closure of a lacerated cervix is by no means a cure of the symptoms arising therefrom. To insure the greatest possible success, the complete removal of all cicatricial tissue must be made along the entire length of the laceration.

2. That the operation for cystocele has proved extremely efficient and satisfactory when the ovoid-shaped denudation has been made, removing as much tissue as will allow a coaptation of surfaces without undue strain upon the sutures, and care is taken that all hemorrhage ceases before uniting.

3. That removing a V-shaped portion from each side of the cervix as high as the vaginal roof, and uniting the surfaces, is the essential step in reducing chronic alveolar hyperplasia of the uterus; if in connection with this we have retroversion, *it should be replaced at the same time*, and the uterus supported with a pessary until the operation of perineorrhaphy is made, when the pessary is to be removed. These points carefully observed, *cure retroversion in a very large percentage of cases.*

4. The extreme care necessary in making these operations:

a. In not operating for lacerated cervix while fungous growths remain in the uterus, or catarrh exists in the cervix.

He thought much time is often lost in preparatory treatment through fear of pelvic inflammation. When only neuralgic pain is left, the latter is not relieved until the operation is made.

b. In using no more sutures than are absolutely necessary to coapt the parts and stop hemorrhage. He believes many operations fail from neglect of this latter caution.

c. In never allowing the use of the catheter after any of the operations if the patient can pass the urine herself. Also in keeping the bowels open from the first.

Thursday, June 14th, Third Day.
Closing Session.

THE REPORT OF THE BOARD OF CENSORS

recommended that the next annual meeting be held in Portland, on the second Tuesday of June, 1884; exonerated Dr. Calvin Seavey from charges preferred against him, on the ground that they were not sustained; asked for the passage of a standing rule requiring all candidates for membership to appear before the Board on the first day of the annual session, and produce diplomas or satisfactory evidence that they possess them; and made the following appointment:

Orator.—Dr. A. S. Hersey, of Oxford.

The report was accepted, and its recommendations adopted.

The President announced as

Committee on State Board of Health.—Drs. I. T. Dana, of Portland; J. M. Bates, of Yarmouth; S. H. Weeks, of Portland.

Committee on Medical Registration Bill.—Drs. O. H. Horr, of Lewiston; J. O. Webster, of Augusta; O. St. C. O'Brien, of Bristol; J. B. Walker, of Thomaston; A. R. G. Smith, of Whitefield.

After the customary votes of thanks, the Association adjourned, having completed one of the most satisfactory sessions for many years.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

Stated Meeting, April 4, 1883.

The President, Alfred Stillé, M.D., in the Chair.

Dr. J. Solis Cohen read a paper entitled

DOES EXCISION OF THE LARYNX TEND TO THE PROLONGATION OF LIFE?

That complete laryngectomy can be performed without sacrifice of life, he said, there is now cumulative evidence. That every operation involving the removal of the larynx imperils the immediate existence of the patient, the records of the procedure abundantly attest. That a very large proportion of the subjects operated upon, say nearly fifty per cent. of them, succumb within so brief a period that their deaths may be justly attributed to the operation, an examination into its statistics renders only too obvious.

The writer owns to a prejudice against the operation; he has never witnessed a laryngectomy, nor seen a patient upon whom it had been performed. It may seem rather an assumption on his part, therefore, to criticise an operation, of the technical procedure and after-management of which he is practically ignorant.

Let us consult the statistics of the operation, and contrast the average life of those who have been subjected to it with the average life of patients, in similar condition, entrusted to palliative treatment.

I have before me, as I write, more or less detailed records of sixty-five operations of complete "extirpation of the larynx," as it is termed.

There are a number of partial excisions which have not been included in the number, because the partial operation is not within the scope of this paper.

Of the sixty-five complete operations, four were performed in non-malignant cases; one for cicatricial syphilitic stenosis, with death "some weeks after from pneumonia" [Watson]; one for necrosis, the case terminating fatally by marasmus five days after the operation [Rubio]; one for polypi of the larynx [Ruggi]; and one for papilloma of the larynx [McLeod].

Of the sixty-one operations remaining in this list, five were performed for sarcoma; in two of which the results were so remarkably exceptional, that attention should be especially directed to them.

I.—Bottini, of Turin, on Feb. 6, 1875, removed the entire larynx from a male subject twenty-four years of age, with a laryngeal sarcoma, partly round-celled, partly spindle-celled. Notwithstanding copious hemorrhage and severe erysipelas, the patient recovered. He was reported well in August, 1881, or more than six years after the operation, and I have seen no notice of his death. He had been performing the duties of a postman, and walking eight miles a day. This is the most successful case on record.

II.—Caselli, of Reggio-Emilia, on Sept. 20, 1879, removed the larynx, pharynx, base of the tongue, soft palate, and tonsils from a female subject, nineteen years of age, for a sarcoma of the larynx, pharynx, palate, and base of tongue. The patient was reported well in August, 1881, practically two years after the operation, and I have seen no notice of her death. This is the second best case on record.

The remaining three patients operated upon for sarcoma died at the periods of seven, fifteen, and seventeen and a half months respectively:

Table I.—Cases of Sarcoma.

1 (Lange) lived nearly 7 months.
1 (Czerny) " " 15 "
1 (Foulis) " " 17½ "
1 (Caselli) was alive Aug. 1881, nearly 2 years after the operation.
1 (Bottini) was alive and well Aug. 1881, 6½ years after operation.

Taking tor granted, as we are bound to do, that death was imminent in these five cases of sarcoma when the operation was resorted to, we have a considerable prolongation of life in every instance, and a remarkable prolongation in two, or in forty per cent. As far as these limited statistics go, therefore, the operation of excision of the larynx in hopeless cases of sarcoma is worthy of the serious consideration of the surgeon.

The history of the remaining fifty-six operations presents a much more gloomy account. They were all for carcinoma, if we may include under that head Schede's case of "cancroid."

Let me read the list of deaths as far as reported:

Table II.—Recorded Deaths after Laryngectomy for Carcinoma.

1.	Tilanus, . .	Death in	36 hours	from	collapse.
2.	MacEwen, . .	"	3 days	"	pneumonia.
3.	Bottini, . .	"	3 "	"	pneumonia.
4.	Langenbuch,	"	3 "	"	collapse.
5.	Schmidt, . .	"	4 "	"	collapse.
6.	Gerdes, . .	"	4 "	"	collapse.
7.	Billroth, . .	"	4 "	"	pneumonia.
8.	Toro, . . .	Death in	4 hours	from	pulmonary emphysema.
9.	Schönborn, .	"	7 "	"	?
10.	Multanowski,	"	5 "	"	pneumonia.
11.	Reyher, . .	"	5 "	"	septic broncho-pneumonia.
12.	Pick, . . .	"	5 "	"	pleurisy and pericarditis.
13.	Reyher, . .	"	7 "	"	septic broncho-pneumonia.
14.	Reyher, . .	"	7 "	"	septic pneumonia.
15.	Watson, . .	"	7 "	"	pulmonary embolism.
16.	Thiersch, . .	"	7 "	"	"secondary infectious" pneumonia.
17.	Albert, . .	"	8 "	"	"diffuse bronchitis and lobular" pneumonia.
18.	Reyher. . .	"	11 "	"	"hypostatic" pneumonia.
19.	Reyher, . .	"	14 "	"	exhaustion.
20.	Maas, . . .	"	2 weeks	"	pneumonia.
21.	Watson, . .	"	2 "	"	pneumonia.
22.	Bircher, . .	"	16 days	"	pneumonia and "pulmonary gangrene."
23.	Hahn, . . .	"	25 "	"	putrid bronchitis.
24.	Billroth, . .	"	6 weeks	"	passage of bougie into mediastinum.
25.	Multanowski,	"	2 mos.	"	recurrence.
26.	Gussenbauer,	"	2 "	"	tuberculosis pulmonum.
27.	Multanowski,	"	3 "	"	"croupous" pneumonia.
28.	Langenbeck,	"	4 "	"	recurrence.
29.	Thiersch, . .	"	4 "	"	recurrence.
30.	Novaro, . .	"	4 "	"	recurrence and hemorrhage consequent upon additional operative procedures.
31.	Von Burow, .	"	4½ "	"	sudden suffocation.
32.	Czerny, . .	"	5 "	"	recurrence.
33.	Volker, . .	"	5 "	"	suffocation.
34.	Heine, . .	"	6 "	"	recurrence.
35.	Maas, . . .	"	6 "	"	recurrence.
36.	Billroth, . .	"	7 "	"	recurrence.
37.	Bruns, . . .	"	9 "	"	recurrence.
38.	Kosinski, . .	"	9 "	"	recurrence.
39.	Reyher, . .	"	9 "	"	recurrence.
40.	Czerny, . .	"	15 "	"	recurrence.

To this list may be added the cases of—

Margary, in which recurrence was reported at 3 months.
Kocher, " " " 7 "

In the following cases neither death nor recurrence has been reported:

1.	Foulis, . . .	alive five weeks after operation.
2.	Czerny, . . .	alive six weeks after operation.
3.	Schede, . . .	artificial larynx adjusted two months after operation.
4.	Mayal, . . .	no recurrence three months after operation.
5.	Von Bergmann,	alive "some" months after operation.
6.	Wegner, . .	alive seven months after operation.
7.	Whitehead, .	"no recurrence;" alive eight months after operation.
8.	Winniwarter, .	"no recurrence;" alive eleven months after operation.
9.	Gussenbauer, .	well fourteen months after operation.
10.	Kocher, . .	no recurrence sixteen months after operation.
11.	Thiersch, . .	well seventeen months after operation.
12.	Thiersch, . .	well eighteen months after operation.
13.	Gussenbauer, .	well nineteen months after operation.
14.	Hahn, . . .	well two years after operation.

Of the forty reported deaths, seventeen, or forty-two and a half per cent., occurred within eight days, and five more succumbed within the second period of eight days.

The danger during the first few days is from shock and from pneumonia. Very few have perished from direct shock, very many from pneumonia. The pneumonia has been attributed generally to the ingress of blood, aliment, and septic materials into the air-passages; but if I may form an opinion from what I have witnessed in many other operations upon the neck, there is a certain amount of risk of pneumonia in all surgical interferences in the cervical region, even when the air-passage is not opened. Thus I have seen it follow extirpation of the thyroid gland, extirpation of cervical neoplasms, and even exploratory incision into the region. It may be that the reduction of temperature to which the pneumogastric nerve is subjected, leads to pneumonia, and that the manipulations within the wound render it especially sensitive. When we reflect that the majority of these operations of laryngectomy consume from one to three hours in their performance, we can fairly presume that the pneumogastric nerve is subjected to sufficient ordeal to excite an early pneumonia, quite independently of access of foreign matter to the lungs; a sequel of the operation against which every available precaution is taken.

The danger from pneumonia does not seem to exist longer than two weeks, for we have but one record of death from this cause after the sixteenth day, and that from "croupous pneumonia," at the end of three months. This important fortnight safely passed, the life of the patient appears comparatively secure up to the fourth month. At the fourth month, death begins to be imminent from recurrence, and we have, in our table, three at four months, one, and possibly several, within five months, two at sixth months, one at seven months, three at nine months, and one at fifteen months. One death from recurrence is reported at two months after operation. Nine cases are reported living at seven, eight, eleven, fourteen, sixteen, seventeen, eighteen, nineteen, and twenty-four months, respectively. Thus forty-two and one-half per cent. of the forty cases recorded as terminating fatally, or more than thirty per cent. of the entire number operated upon for carcinoma, perished within eight days; and at the end of the six months, thirty-five of the forty were dead, or eighty-seven and one-half per cent., making sixty-two and one-half per cent. of the entire fifty-six operations for carcinoma; with great probability of a still higher percentage had all the deaths been reported.

Let us contrast this record with the average life of carcinoma of the larynx not subjected to the radical operation of laryngectomy.

Of a number of cases of carcinoma of the larynx under my own care, who agreed to submit to exsection of the larynx should I so determine, and in whom I performed tracheotomy in preference, one lived six months, two lived seven months, one lived thirteen months, and one lived eighteen months, respectively, after the tracheotomy.

Had laryngectomy been practised in these five cases, with equal tenure of existence, the result would have been accredited to the radical procedure. Had the operation been performed, one life might possibly have been prolonged; the majority, however, would probably have been shortened. At the period at the end of which eighty-seven and a half per cent. of the recorded deaths after larygectomy had occurred, *i. e.*, six months, all my tracheotomized cases were living; and but two of the entire number of fifty-six excisions for carcinoma outlived the longest-lived instance in my tracheotomized list. It is not improbable that a complete series of collated statistics would present a far better exhibit for the cases merely subjected to tracheotomy and palliative procedure. It is generally believed that the natural history of carcinoma of the larynx comprises an average existence of about two years and a half; tracheotomy becoming requisite at a period varying from nine to eighteen months, according as the disease is wholly intra-laryngeal or more parietal.

In laryngectomy, the initial shock is severe, and sure to carry off a large percentage of cases by collapse, or by pneumonia. A certain number of lives are sacrificed; and the condition of the survivors, with their artificial substitutes for the larynx, is often described as pitiable in the extreme.

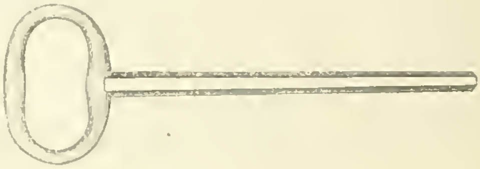
In tracheotomy, there is little shock, very slight danger of pneumonia, and much less risk of septic infection. Life is not likely to be sacrificed in any instance; and existence is much more comfortable after the operation than after laryngectomy.

For these reasons, excision of the larynx for carcinoma does not, in my opinion, tend to the prolongation of life; for the prolonged existence of a very few, seems purchasable only at the sacrifice of the remnants of existence of many others. The greatest good to the greatest number, appears better secured by dependence on the palliative operation of tracheotomy.

DR. W. B. HOPKINS described

A SIMPLE CONTRIVANCE FOR ROLLING BANDAGES.

It consists of a Coats' key having an eight-sided shaft four inches long, such as is used in the ordinary bandage-machine. The shaft tapers from one-quarter of an inch in diameter at the shoulder to one-fifth at the tip. The tip is made quite smooth in order to revolve easily in the palm of the hand.



Reduced one-half.

After fixing the terminal extremity of the bandage upon the shaft, the key is made to revolve by the right hand, the left holding the tip of the instrument in its palm, guiding the bandage, and giving the requisite tension.

THE PATHOLOGICAL SOCIETY OF PHILADELPHIA.

Conversational Meeting, April 26, 1883.

THE PRESIDENT, JAMES TYSON, M.D., IN THE CHAIR.

DR. CHARLES K. MILLS read the paper of the evening, on the

METHODICAL EXAMINATION OF THE BRAIN,

which was amply illustrated by diagrams and specimens prepared by Dr. Mills, and also by a series of preparations from the Mütter Museum of the College of Physicians of Philadelphia.

Dr. Mills passed by with brief allusions the examination of the scalp, skull, and membranes of the brain, the cerebral spaces and vessels, and the best methods of determining volume, specific gravity, and cranial capacity. His chief object, he said, was to discuss and demonstrate the proper procedures to be pursued in methodically examining the surface and interior of the brain after the removal of its envelopes, for the purpose of discovering and accurately localizing lesions.

In order to make an autopsy of the brain proper in a rapid, methodical, and scientific manner, he considered several requirements necessary:

1. The superficial topography of the brain should be understood. The examiner should be able to pick out without hesitation the chief fissures and convolutions. He should also, of course, be perfectly familiar with the numerous superficial subdivisions of the base of the cerebellum.

2. The variations in the size, direction, or arrange-

ment of cerebral fissures and convolutions most likely to occur, should be known to him. Age, race, individual type, education, and other causes, act to produce variations and anomalies. The student thoroughly familiar with the diagrams and demonstrations of Ecker might find himself at sea in his first examinations if this fact is not remembered.

3. A knowledge of the internal structure of the brain should be possessed by the operator. He should understand not only its ventricles and horns, its commissures and peduncles, its foramina and aqueducts, but also its medullated structure, as exhibited by sections of the cerebral and cerebellar hemispheres made in various directions. Methodical cerebrotomy, practised in the vertico-transverse, vertico-longitudinal, horizontal, and even in other directions, will give certain more or less fixed appearances, which should be familiar.

The surface of the brain should be thoroughly examined for morphological peculiarities, such as deficiency or excess of fissures and gyri, confluence of fissures, simplicity or complexity of folds and furrows; and also, of course, for pathological changes, for atrophy, softening, hemorrhages, changes of color, etc. Dr. Mills described the fissures and convolutions as given by Ecker, and also called attention to some of the most common and striking variations from the usual type of the adult human brain, dwelling particularly on the fissures most likely to be confused—the precentral, central, and retro-central, etc. The views and observations of Moritz Benedikt on the brains of criminals were referred to and criticised.

The examination of the fissures, convolutions, cranial nerves, and various regions of the surface of the cerebrum and cerebellum having been completed, the interior of the brain should next claim attention. The examination should be made in such a way as to cause as little disturbance as possible of the relations of parts by the incisions, and to allow, if desired, that the brain be brought together again after the autopsy and preserved as a whole. This could be done so as to submit every cavity, canal, part, and structure to comparatively minute exploration. Some cerebrotomists, as Bitot, without stopping to investigate particularly the various cavities and subdivisions, at once proceed to divide the brain into blocks by large incisions made at carefully selected points.

The advantages of each of the three forms of sections—vertical transverse, vertical antero-posterior, and horizontal—were pointed out. The vertical transverse sections are the most generally useful. What are known as the middle transverse, mesolobar, or cortico-central zones are most important to understand. These comprise all the cerebral mass situated between the anterior and posterior extremities of the corpus callosum. Bitot describes and figures seven of these zones. Sections and diagrams were exhibited by Dr. Mills, and the places and methods of making these sections were explained.

The particular convolutions, and the regions of the ganglia, cerebrum ovale, capsules, etc., traversed by these sections were shown. The ganglio-insular region was particularly described. This region includes a large portion of the island of Reil, of the optic and striate ganglia, of the external and internal capsules, and of the external wall. The importance of having at command a fixed nomenclature for the various planes and regions was dwelt upon. Following the method of Bitot, the surfaces exposed by the sections were divided into a superior, inferior, and middle division, and these were studied. A diagram representing the relations of the middle portion of the brain to cranium was shown and explained.

Dr. Mills said that he preferred to open the brain so as to expose its ventricles, horns, and parts, and examine each as nearly as possible in its integrity. By his methods, such structures as the corpus callosum, septum lucidum, tænia semicircularis, velum interpositum, choroid plexus, fornix, foramen of Munro, pineal gland and its peduncles, etc., could be, each in turn, investigated for lesions.

After the cavities and horns had been exposed by proper incisions, methodical cerebrotomy, as advised by Charcot and Pitré, or Bitot, could be practised, the cuts being made from within outwards, but not quite through the brain, so that the whole mass could be drawn together again after the cut surfaces had been examined.

Dr. Mills described three of the best methods of opening the brain;

1. At the base, by taking as guides certain fissures and other anatomical landmarks.

2. From the upper surface, by incisions through each side of the corpus callosum, or along the lower borders of the calloso-marginal fissures.

3. By dividing the brain into two symmetrical halves by a careful median section. This should only be done after the parts in the median line had been previously explored.

DR. SHAKESPEARE said that he would like the author to state why he prefers to open the brain from the base rather than from above. Dr. Shakespeare thought that by opening from above, the floor of the lateral ventricles would be better explored, which contain the large ganglia of the brain, and a better topographical view would be obtained.

The most usual cause for which the brain is examined is apoplexy. In these examinations it is necessary that very thin sections shall be made so that all parts can be carefully examined. Dr. Mills has already pointed out the desirability of making these sections in such a manner that none shall be detached, so that when the examination is over all can be readily replaced still leaving the brain practically in one piece. I believe that these two objects can better be obtained by making the examination from above as taught by Prof. Orth (*Compendium der Pathologisch Anatomischen Diagnostik*) than by making it from below. The only part capable of holding the sections together is the cortex with its adherent vessels. Prof. Orth advises making a longitudinal section towards the cortex on a level with the corpus callosum. This section is made deep enough to cut the cortical convolutions half through. This leaves enough tissue to keep the part attached. The anterior horn, the ventricles, and posterior horn are laid open by a second incision. Transverse cuts as thin as desired are then made in the side-pieces. These cuts go half way through the cortex. The large ganglia are then sliced transversely, beginning at the front and going backwards. These are also made to go half way through the cortical substance of the base and so on. The examination being finished the parts can all be folded together like the leaves of a book, not a single piece having been detached. The only way I can see of making thin sections of every part of the brain by the other method is to divide it into two lateral halves, and then making your sections towards the cortex, for if the sections be made directly across the brain the parts in front of the corpus callosum and behind the peduncles will be entirely detached.

Another objection is that seven sections are too few, and if it is desired to have more, it will be a difficult task to hold the already cut sections in one hand and split them with the knife held in the other.

DR. BARTHOLOW preferred to open the brain from above for similar reasons to those assigned by Dr. Shakespeare.

Dr. Eskridge expressed a preference for the older method.

Dr. Mills then closed the debate by reiterating and amplifying the arguments contained in his paper.

MEDICAL ASSOCIATION OF CENTRAL NEW YORK.

Sixteenth Annual Meeting, held at Syracuse, May 15, 1883.

(Specially reported for The Medical News.)

The Sixteenth Annual Meeting of the Medical Association of Central New York was held at Syracuse, May 15, 1883, the President, **Dr. Theodore Dimon**, of Auburn, in the Chair.

The **President** then delivered

THE ANNUAL ADDRESS,

and took for his subject, "Is Medicine a Science?" He explained the difference between fixed or certain science, and theoretical or hypothetical science. He claimed that medicine is a theoretic science, and reviewed its progress from its establishment in Greece by the Asclepiadæ to the present time.

Dr. A. Clifford Mercer, of Syracuse, exhibited specimens of the

BACILLUS TUBERCULOSIS,

and made some remarks on the subject.

The *bacilli* shown were made evident by the following process: From a cup containing the sputa of a tubercular patient a small portion was removed by means of forceps and placed upon a thin piece of glass, such as is commonly used by the microscopist to cover his specimens. A second cover-glass pressed down upon the sputum, and then removed, caused the sputum to lie in a thin layer upon the first cover-glass. This first cover-glass, with its layer of sputum, was then thoroughly dried and slightly heated over the flame of a Bunsen burner to coagulate the sputum and fix it to the glass supporter for subsequent treatment. The sputum with its supporter was dropped into a watch-glass containing a solution of magenta in water and alcohol, rendered slightly alkaline by caustic potash, and was allowed to remain in this staining-bath fifteen minutes. It was then taken out, washed under a small stream of soft water to remove the excess of magenta and dropped into a watch-glass of diluted nitric acid to dissolve out the last remnant of magenta stain from every object in the sputum excepting the *bacilli tuberculosis.* It was again washed under the soft-water tap and then dropped into a neutral bath of aniline violet for fifteen minutes to tint the objects bleached of their magenta stain and thus cause the magenta-stained *bacilli* to show more plainly. It was then put successively into baths of ordinary alcohol and absolute alcohol, was dried, carefully flooded with a drop of oil of cloves and finally dropped sputum-side down upon a drop of Canada balsam on the centre of a microscopist's glass slip, three inches by one inch. After the Canada balsam had become hard, a ring of shellac dissolved in alcohol was applied about the edge of the cover-glass to prevent the oil of cedar, used later in examining the specimens under the microscope, penetrating beneath the cover-glass and destroying the specimens.

The foregoing process is partly that used by Koch, of Berlin, the original discoverer of the *bacilli tuberculosis*, and partly that modification of the Koch-Ehrlich process used by Gibbes, of London. This mixed process has, happily given excellent results, but was only ventured upon because in Syracuse it is not possible as yet to obtain all the necessities for the Gibbes' process, which is generally thought to give the best results.

Dr. Van De Warker, of Syracuse, reported a case of *Cancer of the Uterus*, and exhibited specimens.

Dr. F. A. Mandeville, of Rochester, read a paper on

APHONIA.

Cases due to laryngeal catarrh or over-exertion of the voice usually yield quite readily, he said, to treatment, which should consist in complete functional rest, the application of astringents and sedatives to the larynx, and of electricity direct to the muscles, effected by means of Mackenzie's electrodes, under guidance of the laryngeal mirror. Cases due to pressure by enlarged glands should be treated by counter-irritants externally and alteratives internally. The galvanic current sometimes proves of signal value in these cases.

Aphonia due to anæmia yields readily to general treatment. In hysterical cases, the methodical exercise of the voice, mechanical irritation of the mucous membrane of the vocal cords, or the application of the galvano-faradic current direct to the vocal cords was recommended. The results from this latter procedure are sometimes very gratifying, as often a single application of electricity to the vocal cords will restore a voice that has been lost for months or years. The relief is not always permanent from a single application; but the continuation of this treatment every two or three days will effect a cure. Hypodermic injections of strychnine, in doses of $\frac{1}{64}$th of a grain to commence with, and increased as necessity requires, are also often followed by good results. They should be repeated every three or four days.

For organic aphonia, no definite plan of treatment can be laid down. Electricity is often beneficial even in incurable cases. Constitutional treatment depends upon the nature and origin of the disease. Tracheotomy is indicated when stenosis of the glottis exists, or is imminent, as in cases of paralysis of the abductors.

Dr. F. M. Hamlin, of Auburn, read a paper on

MICROSCOPIC EXAMINATION OF SEMINAL STAINS.

He stated that after trying the different methods suggested by various authorities, he simply soaked the cloth on which the semen had dried in water, when the spermatozoa could be pressed out and examined.

Dr. Wm. F. Sheehan, of Rochester, read an interesting paper on *Chickenpox in the Adult*. He referred to the difficulty in some cases in diagnosticating varicella from variola, and he reported a number of cases of mistaken diagnosis. He claimed that one source of error was the fact that many writers of authority stated that varicella was a disease exclusively of childhood.

Dr. C. O. Baker, of Auburn, read a paper on *Restoration of the Peritoneum.*

Dr. J. P. Creveling, of Auburn, read a paper on *Sarcoma and Lympho-sarcoma of the Neck and Tonsils.*

Dr. J. O. Roe, of Rochester, also read a paper on the same subject.

Dr. Chas. S. Starr, of Rochester, reported a case of *Pyonephritis*, which he saw under Dr. Billroth's care in Vienna.

Dr. W. H. Brown, of Syracuse, presented a patient from whose right eye he had removed a piece of iron by a magnet.

Dr. Dimon, Chairman of the Committee appointed at the last meeting on the care of the insane, presented their report, which was signed by the committee, **Drs. Dimon, Button**, and **Herriman**, and it was unanimously adopted.

DR. W. S. ELY, of Rochester, reported an interesting case of *Post-partum Hematocele.*

DR. CALVIN, of Clyde, reported a

CASE OF TAPEWORM,

in which he succeeded in expelling the parasite by male fern, after having tried the pumpkin seed in vain.

The following were elected

OFFICERS FOR THE ENSUING YEAR:

President.—DR. CHARLES S. STARR, of Rochester.

First Vice-President.—DR. J. P. CREVELING, of Auburn.

Second Vice-President.—DR. ELY VAN DE WARKER, of Syracuse.

Secretary (three years).—DR. J. N. ARNOLD, of Clyde.

Treasurer (three years).—DR. ALFRED MERCER, of Syracuse.

Censor to Medical Department of the Syracuse University.—DR. RICHARD M. MOORE, of Rochester.

The Society then adjourned.

CORRESPONDENCE.

LETTER FROM PRAGUE.

The Hygienic Exhibition at Berlin—Prague from a Pathological Standpoint—Sword-swallowing and its Pathological Results.

AFTER a pleasant sea-voyage and ten days' travelling in Germany, I reached this place just three weeks ago. I was, of course, particularly interested in the hygienic exposition in Berlin, and spent three most delightful days there, chiefly in the pavilion of the "Gesundheitsamt," *i. e.*, health office of Berlin. All of the apparatus used by Koch in his investigations was exhibited, as well as pure cultivations of every known species of bacteria. The methods of work, etc., were fully explained by one of the assistants from the office, detailed there for that purpose. The macroscopic differences—differences in mode of growth, in color, in effect on the gelatine, and in the various bacteria—could be well studied in the test-tubes in which they were exhibited, these macroscopic differences being in many cases more valuable as a means of differential diagnosis than the microscopic, just as, in many cases, plants will present more differences when growing in a mass than will be seen on closer analysis of the individuals. Of course this collection included cultures of the tubercle-bacillus, as well as of the last bacillus that has been made known to us through this office—viz., that causing the "Rotz" farcy. This form presents both macro- and microscopically much similarity to the tubercle-bacillus, as does indeed the farcy nodule to the tubercle, but there are sufficient points to make a diagnosis tolerably easy.

In another room of the pavilion, charts were exhibited which showed at a glance the mortality for each year of life in the different districts in Germany. The mortality was represented by the different shades of red, a light pink being the most favorable, and from this the color deepened to very dark red, Bavaria being mostly painted so dark that but little of the red tinge could be seen. Munich, where one would think the beer alone would offer sufficient inducement to the people to stay there forever, to say nothing of other inducements, such as music and art, seemed to head the mortality list.

Another room showed the methods used in analyzing water—not as to its chemical constituents, but as to the number and nature of the germs contained in it.

In the Austrian department were a series of tables showing the comparative mortality of the zymotic diseases in Vienna, before and after the introduction of the Hochquelle water, in 1873. The decrease brought about in the number of cases of diphtheria and typhoid was most striking.

It makes an American always feel a little badly to see in another country such an institution as this Berlin health office; to think of the great and good work which is being done there in the cause of science and humanity (for they always go together), while we, although ready to reap the results of all work done elsewhere, contribute so little to the general cause. Well, quite a number of us pride ourselves on being too practical to devote our time to such work, but looking at it in its narrowest view—strictly a monetary one—it pays. The decrease in the number of cases of anthrax in cattle, due to the discovery of the etiology of the disease and the conditions of its spread, has been more than sufficient to pay all costs of conducting the institution, for which the German Government gives nearly $50,000 annually.

From a pathological aspect, the fine old city of Prague is perfect. True, people with æsthetic noses might feel badly in some of the streets, and capricious stomachs might rebel at some of the food one has to partake of, but for the study of pathological anatomy it is perfect. A population of 240,000, and last week 214 deaths. Typhoid fever, dysentery, and other intestinal affections make up a large part of the autopsies. The typhoid here, as seen in the Pathological Institute, is almost always perfectly typical, and indeed I often think if post-mortems were made more carefully and extensively with us, a good many of those wonderful atypical cases of typhoid, typho-malaria, etc., could be cleared up. Possibly, too, we would then have more cases of acute tuberculosis, and not so much typhoid.

There is no typhus here as yet, but in the present health relations of the place—the poverty, filth, and general malnutrition of the lower classes—it may pretty safely be reckoned on in the winter. The great prevalence of typhoid is probably due to the bad water, that from several wells being in fact known to be infectious.

The old adage that it never rains but it pours seems often well illustrated in medicine. Sword-swallowers are known to be comparatively rare everywhere, and autopsies on them in consequence of injuries received while pursuing their lawful occupation, are still rarer; yet last week we had two of them in the Institute. One especially was a very remarkable case. The subject was a young man of eighteen, tolerably well nourished. The sword he used had been long in the family—was in fact a sort of *sabre de mon peré*—and for a number of years had been used in this peaceful manner. This constant use had weakened the weapon, so that when, after swallowing it, the young man made his usual stiff bow to the public, it broke, the handle and several inches dropped out, the rest remained. The father, who was also a renowned artist in this line of work, immediately thrust another sword down the boy's throat, to see what had become of the first, and to facilitate its passage into the stomach in case it had become lodged in the œsophagus. After this, the boy was given violent emetics, then swung up by the heels, but to no purpose, and finally was sent into the hospital. By palpation, the piece of sword could be felt in the stomach, but it was not possible in any way to get it lengthways between the hands. Prof. Gussenbauer operated, and drew out a piece of steel 27 centimetres (10½ inches) in length. After a few days, the boy was post-mortemed, and it was found that the operation wound had completely healed, but that a circumscribed peritonitis had taken its origin from another part of the stomach. Here was a perforation, and a dark line extended from this across the stomach and up the œsophagus to a laceration. The explanation was easy; the piece was too long to pass entirely into the stomach; so one end had rested there, the other remaining in the œsophagus. As the œsophageal end was jagged, it could not move up, and in consequence of the violent emetics, and the turning up side down, lacerations had been made at the two points.

The other case was more simple. This man, an uncle or some relation of the first case, lacerated the pharyngeal wall; a violent phlegmonous inflammation of the surrounding parts was set up, and his death was caused by this in a few days.

It remains to be seen whether this interesting family will contribute anything more to our knowledge of the pathological possibilities of sword-swallowing. I only mention these two instructive cases on account of the practical points they involve.

W. T. C.

Prague, June 14, 1883.

A SUPPLE TONGUE.

To the Editor of The Medical News.

Sir: Last winter, a gentleman, who happened in my office with one of my patients, asked me what I thought of the possibility of passing the tip of the tongue behind the palate into the vault of the pharynx. I told him I thought it might be possible, but extraordinary, whereupon he proceeded to demonstrate it by slowly turning the tip of the tongue backward and carrying it behind the edge of the palate to the vault of the pharynx. He said that he had first attempted the feat for the purpose of dislodging collections of mucus from the post-nasal space. It required considerable practice, and at one time, while learning it, he had been seized with a spasm of the muscles of the tongue that nearly choked him. He now accomplishes it as easily as the protruding of the tongue from the mouth, and he has acquired so much dexterity that he can tell accurately the condition of the turbinated bones as to swelling.

The catarrhal condition which first caused him to practise this method of freeing the parts has entirely disappeared, and now nothing abnormal can be seen either in the pharynx, palate, or tongue, excepting some swelling of the turbinated bones at their posterior ends. Respectfully yours,

E. Fletcher Ingals, M.D.

Chicago, June 25, 1883.

NEWS ITEMS.

BALTIMORE.

(*From our Special Correspondent.*)

The Chemical Laboratory of the Johns Hopkins University has recently been completed, and formally opened by Prof Remsen. The building covers a space of about 100 x 50 feet, and consists of three stories and a basement. It is constructed of pressed brick and Cheat River bluestone, and while making no pretensions to architectural effect is nevertheless a handsome and substantial-looking edifice. In the basement are the storerooms for apparatus, two large rooms fitted up for assaying and other furnace-work, and rooms intended to be used for operations upon a large scale. There are also two large steam-boilers which heat the chemical laboratory and the adjoining biological laboratory, which is now in course of erection, and will shortly be completed.

The main entrance to the laboratory is upon the first floor, and adjoining the entrance are, on the left the "gas-analysis" and "photometric" rooms, and on the right, "laboratory A," a large room 30 x 32 feet, supplied with desks for 40 "minor-course" students; each desk is supplied with gas and water, shelves for reagent bottles, and drawers and a cupboard for apparatus, etc.

The gas-analysis room is, as its name implies, designed for operations with gases. It is a well-lighted room with a very carefully and tightly laid floor, so constructed that if any mercury (large quantities are employed in gas analysis) be spilled upon the floor, it runs into a receptacle provided for the purpose, and is not lost. The photometric room is designed for photometric, spectroscopic, or other work requiring a dark room; the windows are fitted with blinds, by means of which the room can be rendered perfectly dark, and the walls and ceiling are blackened to prevent reflection from them.

Adjoining the photometric room is the apparatus office, from which students obtain their apparatus, giving the custodian a receipt for it; then comes the "balance-room," and laboratory B, 30 x 42 feet, with desks for thirty "major-course" or second-year students. The desks in this room are similar to but somewhat larger than those in "laboratory A." The private laboratory and office of the sub-director, Dr. H. N. Morse, adjoin, and, with a store-room for chemicals, constitute the remaining rooms upon the first floor.

Upon the second floor is the main "lecture-room A," seating about fifty (27 x 30), behind which is the preparation-room, used in getting ready the lecture experiments. Next to the lecture-room is the library, consisting entirely of works upon chemistry and mineralogy, and containing all the principal journals of these sciences in the world. In the front of the building, and extending across its entire breadth, is "laboratory C," or the "research-room." This is a very handsome room, 16 x 55 feet, with walls of enamelled brick, and is capable of accommodating comfortably about twenty students. It is exclusively occupied by the "Fellows," and other advanced students, who are engaged in original research in the science of chemistry. Adjoining and communicating are the handsome private office and private laboratory of the Director, Prof. Ira Remsen.

The remaining rooms upon this floor are a "balance-room" for the use of the occupants of "laboratory C" and the "combustion-room."

Upon the third floor are "lecture-room B," seating about twenty, employed for special courses of lectures on chemistry, and "lecture-room C," devoted to mineralogy and provided with desks for blowpipe-work; both these rooms have adjoining preparation-rooms. The rest of this floor is taken up with the large "museum" or collection-room, 30 x 55 feet, containing the mineralogical collection and the collection of chemicals used in illustrating the lectures.

Two preparation-rooms communicate with the museum, and are used in preparing specimens of minerals or chemicals to be placed in the collection.

A noticeable feature of all the rooms in the laboratory is the size and number of the windows, and the height of the ceilings, insuring abundance of light and fresh air; the ventilating arrangements are also very perfect and efficient.

The laboratory is very fully provided with all the latest forms of apparatus, and, in short, in completeness and convenience it is probably second to no other in the world.

PHILADELPHIA.

A Porro Operation.—Dr. W. H. Parrish performed a Porro-Müller operation on a dwarf at the Philadelphia

Hospital on June 28th. The case terminated unfavorably on the third day.

BERLIN.

(*From our Special Correspondent.*)

The Hygienic Exhibition.—At the opening ceremony of the "Ausstellung für Hygiene und Rettungswessen," which had been so sadly destroyed by fire last year, H. I. H., the Crown Prince of Germany was present in the name of the Empress Augusta, the lady patroness of the exhibition. Surgeon-General W. Roth, of Dresden, is one of the presidents. The enormous exertions of the committee to repair last year's losses have been crowned by full success—thanks to the active support of private individuals as well as of local and State authorities.

The great attraction for members of the profession is the "Pavilion of the Board of Health," representing two laboratories fitted with all implements for researches on infectious diseases and disinfection on the one hand, and on adulteration of food on the other. In the former are seen the different kinds of sterilizing apparatuses, the thermostate after d'Arsonval, and Leitz's microphotographic apparatus. There are exhibited, besides, specimens of all micro-organisms till now bred in pure cultures, from the common penicilium up to the bacilli of anthrax, tuberculosis, and farcy. Here Dr. Robert Koch himself and his assistants are demonstrating in the most liberal manner the principles of their methods as described in the "Communications of the Board of Health." Even quite new, and yet unpublished, results are freely laid before the visitors, for instance the discoveries recently made in the process of *milk-coagulation*, than which none can better, and in a more simple way, illustrate the principles and prospects of pure culture experiments.

It is well known, that sterilized milk in a test-tube, if protected against organic germs by a cotton-wool cover, will rest unchanged for months. The power of coagulation, therefore, must be due to the micro-organisms prevailing in this fluid before sterilization, but it was quite uncertain to which of them this power was to be ascribed. Now, Koch's method has soon settled the question. Pure cultures of the "Oidium lactis" do *not* change the sterilized milk in any way, and not more so a micrococcus very common in ordinary milk. On the contrary, a *bacillus* producing lactic acid by its development, instantaneously effects regular coagulation, another bacillus (producing butyric acid) coagulates more irregularly. This discovery may become a clue for the etiology of infant diarrhœa. The methods for testing water, air, and soil, already described in the *Mittheilungen*, are likewise much improved since, and will soon become equivalent to the merely chemical methods.

A second object, which deserves the full attention and the profound study of all sanitarians, is a collective exhibition of thirty-six town municipalities, showing by maps, drawings, and models, the different sanitary arrangements made in every place, as for sewage, water-supply, school and hospital building, street pavement, etc. The large communities of Berlin, Hamburg, Frankfort, and Vienna, are naturally excelling among their sisters.

The hygiene of prisoners is illustrated by instructive models, contributed by the Prussian Ministry for Justice.

Among the conveyances for the transport of sick and wounded, the Prussian and Bavarian hospital trains are of special importance for our warfaring country. A new hospital tent is exhibited by the Prussian War Department. Prof. Esmarch in his field companion destined for the Serbian army, has adopted the tablet form for the medicaments to be carried in the field.

Mr. Siemens, of Dresden, has erected in the exhibition territory his cremation-stove in full size.

Surgical, optical, physiological, and self-registering meteorological instruments, are abundantly exhibited.

The catalogue of the library contains in the average 2500 books, maps and diagrams, and 180 periodicals; due stress has been laid upon statistics.

In the evenings, the place is illuminated by all different sorts of electric and gaslight.

The whole will be of great benefit for the prosperous development of a science so eminently practical and so much depending upon the intelligent understanding of the population as hygiene.

The exhibition is intended to be kept open until the middle of October.

Harvard Medical School.—At the annual commencement of Harvard University, held on June 27th, the degree of M.D. was conferred on seventy candidates.

The Kentucky School of Medicine.—At the Twenty-eighth Annual Commencement of this School held at Louisville, on June 26th, the degree of M.D. was conferred on fifty candidates. The valedictory address was delivered by Prof. J. M. Matthews.

A Banquet to Professor Villemin.—Prof. Verneuil, in the belief that during the now prevalent discussions on the question of the communicability of tuberculosis the claims of Prof. Villemin, of the Val-de-Grace, have been too much overlooked, especially by foreigners, organized a protesting banquet at the Café Riche. It was largely attended by members of the Faculté de Médecine and medical officers of the army and navy, and several eloquent addresses were delivered. In the toast of the evening, Prof. Villemin's claims as the discoverer of the inoculability of tubercle by experimental investigations were warmly and successfully vindicated. As might be expected on such an occasion, these claims were carried somewhat too far when it was maintained that all the recent discoveries relating to the parasitic nature of the disease are only the natural and necessary results of Prof. Villemin's and M. Pasteur's researches.—*Medical Times and Gaz.*, June 9, 1883.

Antivivisection.—On the 22d of May, while engaged in demonstrating the fact that analgesia without loss of general sensibility could be produced in the larynx, M. Brown-Séquard was attacked by a young woman, who struck him with her umbrella. Her defence was, that the experimenter intended to cut the vocal cords of the monkey so as to prevent its crying out. This accident has produced a strong "contra-antivivisection" feeling, and on May 31st, M. Brown-Séquard lectured on "The Utility of Vivisection" to a large and enthusiastic mixed audience.

New Medical Journal.—*Gazzetta degli Ospitali* announces the appearance of La Condotta Medico-Chirurgica Itialiana, but neglects to give the place of publication.

Smallpox in Bombay, India.—The epidemic declared itself early in January of this year. During the week which ended on the 23d of that month there were 32 deaths from the disease recorded within the municipal limits, and in spite of the efforts of the Health Department to check it, the mortality rose steadily week by week until it reached its maximum of 137 deaths during the week which ended March 6th. The weekly death-list increased from 32 to 71, 88, 94, and 107 to its maximum. During the week which ended March 13th there were 131 deaths recorded; 123, 93, and 89 in the three following weeks, after which there was an increase to 101. The disease then began to decrease rapidly, the weekly mortality falling from the last-mentioned number to 66, 49, 46, and 21 during the week which ended May 8th. The deaths were scattered over all the districts of the town. With the exception of one or two European sailors, the victims were low-caste Hindus, and to a lesser extent Mahomedans. Smallpox prevails with much virulence at many other points in the Bombay Presidency.

PORRO OPERATION.—DR. BONORA performed the Porro operation for grave pelvic deformity, on May 4. A telegram about ten days afterward stated that the patient was doing well. Pulse 91, temperature 98.6°. The operation was completed in forty-five minutes.

RESISTANCE OF THE BLACK RACE TO SCARLET-FEVER POISON.—Among the *news items* of the issue of this journal for May 19, some figures were given, showing that our colored population do not succumb to the diphtheritic poison so readily as their white brethren. A similar resistance appears to be manifested by them against the allied scarlatinal poison. Statistical returns in this country are somewhat fragmentary; but we succeeded in obtaining the needful data for the year 1881 with respect to fourteen of our towns having mixed populations. They were Wilmington, Del.; District of Columbia, Norfolk and Petersburg, Va.; Wilmington, N.C.; Charleston, S.C.; Atlanta, Ga.; Natchez, Miss.; New Orleans and Shreveport, La.; Nashville and Memphis, Tenn.; Louisville, Ky., and St. Louis, Mo. The mortality returns of several other cities, such as Richmond and Lynchburg, Va., and Savannah and Augusta, Ga., were examined, but they were not embraced in the calculation, as no death from scarlet fever either among the white or colored people appeared on them. These fourteen towns had an aggregate population of 1,156,801, of which 871,886 were whites and 284,915 colored people. The recorded deaths from scarlet fever in this population amounted to 526, of which 85 were deaths of colored and 441 of white persons. Had the colored people died at the rate which prevailed among the whites, 144 deaths would have been recorded instead of 85. In other words, the deaths of the colored people from scarlet fever were to those of the whites as 1 is to 1.7. The figures formerly given as to diphtheria are in the proportion of 1 to 1.5. This smaller death-rate is the more remarkable when we consider the overcrowding and other unsanitary conditions in the habitations of the colored people; their improvidence; the poor nursing given to their sick, and neglect of medical attendance.

HEALTH IN CALIFORNIA.—The *Monthly Circular* for April of the State Health Board gives abstracts of the reports of deaths in twenty-two towns having an aggregate population of 115,980. The reports from San Francisco and Oakland were not received in time for tabulation. The mortality-rate in the twenty-two towns was equal to 14.89 per 1,000 annually. In Sacramento the rate was 15.99. Consumption caused 22.9 per cent. of the total mortality. This is a much larger percentage than is given by the cities in the Eastern States—larger even than the percentage given by the colored people of the Southern towns. But this is owing not to any greater prevalence or mortality of consumption on the Pacific coast, but to the lesser mortality from other diseases. Consumption stands out as a more prominent figure in the mortality lists. Acute pulmonary affections caused 15.3 per cent., and typhoid fever 4.2 per cent. A single death is attributed to diphtheria, reported from Sacramento; one to croup, and one to scarlet fever, both from Los Angeles; two to whooping-cough, one from Sacramento, and the other from Stockton; two to smallpox, from Nevada City, and two to measles in San Bernardino. Smallpox at Napa and Nevada City has been kept under control. This disease has also appeared in a family at Visalia, six cases, one of which was fatal; and in Tulare County, about twelve miles from Visalia, eight cases and one death, all in one family. Preventive measures have been adopted.

HEALTH IN MICHIGAN.—Reports to the State Board of Health, for the week ending June 23, 1883, indicate that diarrhœa has considerably increased, that remittent fever, whooping-cough, bronchitis, and cholera morbus have increased, and that measles has decreased in area of prevalence.

Including reports by regular observers and by others, diphtheria was reported present during the week ending June 23d, and since, at thirteen places, scarlet fever at twenty places, and measles at twenty-two places. Smallpox in Kalamazoo Township, June 23d.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JUNE 25 TO JULY 2, 1883.

HEGER, A., *Major and Surgeon.*—Relieved from the further operation of paragraph 9, S. O. 55. c. s., Department of Texas, and will return to his station, Fort Clark, Texas.—*Par. 2, S. O. 69, Department of Texas, June* 25, 1883.

SMART, CHARLES, *Major and Surgeon.*—Assigned to duty in the Office of the Surgeon-General, U. S. Army, and in addition to his duties in the Surgeon-General's Office, will continue to serve as a member of the National Board of Health.—*Par. 8, S. O. 147, A. G. O., June* 27, 1883.

HAVARD, VALERY, *Captain and Assistant Surgeon.*—Assigned to duty with expedition to complete the survey of the country west of the Rio Pecos, Texas.—*Par. 8, S. O. 68, Department of Texas, June* 22, 1883.

WINNE, CHARLES K., *Captain and Assistant Surgeon.*—Assigned to duty as Post Surgeon at Fort Winfield Scott, California. —*Par. 1, S. O. 69, Department of California, June* 19. 1883.

WORTHINGTON, JAMES C., *Captain and Assistant Surgeon.*—Assigned to duty at Cantonment, on the Uncompahgre, Colorado. —*Par. 4, S. O. 128, Department of the Missouri, June* 21. 1883.

EVERTS, EDWARD, *First Lieutenant and Assistant Surgeon.*—Relieved from duty at Fort Coeur d' Alêne, and assigned to duty as Post Surgeon at Fort Lapwai, Idaho.—*S. O. 81, Department of the Columbia, June* 14, 1883.

STRONG, NORTON, *First Lieutenant and Assistant Surgeon.*—Relieved from operation of Par. 2, S. O. 42, c. s., Department of the Platte, and assigned to duty with battalion infantry now on duty between Forts Thornburgh and Bridger, Wyoming.—*Par. 2, S. O. 83, Department of the Platte, June*, 21, 1883.

To be Assistant Surgeons, with the rank of Captain, after five years' service, in accordance with Act of June 23, 1874:

Assistant Surgeon VICTOR BIART, June 6, 1883.
Assistant Surgeon WILLIAM W. GRAY, June 6, 1883.
Assistant Surgeon LOUIS BRECHEMIN, June 6, 1883.
Assistant Surgeon LOUIS A LA GARDE, June 6, 1883.
Assistant Surgeon JUNIUS L. POWELL, June 6, 1883.

—*A. G. O., June* 25, 1883.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. XLIII. SATURDAY, JULY 14, 1883. NO. 2.

ORIGINAL LECTURES.

POPLITEAL ANEURISM.

A Clinical Lecture, delivered in the Hospital of the University of Pennsylvania.

BY JOHN ASHHURST, JR., M.D.,
PROFESSOR OF CLINICAL SURGERY.

(Reported by LOUIS J. LAUTENBACH, M.D.)

GENTLEMEN: The case which I bring before you to-day is one which is interesting in relation to diagnosis as well as in regard to treatment. The case is one of aneurism of the popliteal artery.

The patient's history is that in 1878, somewhat over four years ago, he was shot in the calf of the left leg, the ball of a small pistol entering and passing upward. The scar of the wound is seen indistinctly; the wound was apparently trivial. From two to two and a half years after the injury, the patient noticed a small lump, which pulsated. The pulsation increased for some months, but he says that it is now not as marked as it has been.

The growth of the tumor, until three or four weeks ago, was very gradual, but about that time it began to increase rapidly, until it has attained the size which you now see; it is now about six inches in length and almost as much across.

Let us briefly go over the symptoms of aneurism and the diagnostic points which serve to distinguish it from other tumors. Various definitions of aneurism have been given by different writers; that which I consider the most accurate and, therefore, the most satisfactory, is that an aneurism is a disease of the arteries consisting in a circumscribed dilatation of one or more of the arterial coats. It is not merely a dilatation, since we frequently have general dilatation of the aorta without any aneurism. I do not refer here to the affection termed aneurism by anastomosis, but only to that which is designated by the word *aneurism* used by itself. Some authors have defined an aneurism simply as a tumor containing blood; but, according to this definition, a hæmatocele would be an aneurism.

The tumor here not only *pulsates*, but it has also an *expansive* pulsation, which can be felt by putting the hands on either side of the tumor, and which can be seen by noticing that the hands are pushed apart. If the tumor were a tense bursa, or a fibroid tumor, situated over the popliteal artery, the pulsation would simply be up and down; there would be no lateral pulsation. A very characteristic symptom of aneurism is the *aneurismal bruit*, which is caused by the blood entering the sac of the aneurism; a sound somewhat similar to that which is caused by blowing into a bottle, or which is produced by the rushing of any liquid into a cavity through a small opening. This symptom is not well marked in the present case, and its deficiency is probably due to the fact that the aneurism has reached the stage of what is known as a "diffused aneurism," or, as Mr. Barwell prefers to call it, a "consecutive aneurism." The sac proper of the aneurism has given way, but the condensed tissues outside of the arterial tunics have formed a wall to hold the blood. When the tumor is in this condition the bruit is not as marked as in the early stage. Beside the bruit, we often have present an *aneurismal thrill*. This is not universally present, and it is not found in this case.

There are other very important symptoms connected with the pulsation. Compression of the main artery above the aneurism causes flaccidity of the sac and cessation of the pulsation, but in the case of most tumors the size of the mass will not be diminished. Some vascular tumors will become softer and smaller, but may be distinguished from aneurisms by the way in which the pulsation returns when the pressure is removed. In a case of vascular tumor the pulsation returns gradually, while in aneurism the pulsation immediately returns, and is just as forcible as it was before the main artery was pressed upon.

Another point which is particularly illustrated by an aneurism in this situation is the difference in the degree of pulsation depending on the position of the limb. If there is an abscess or enlarged bursa over the artery in this situation, the pulsation becomes more distinct by straightening the limb, whereas the pulsation becomes less noticeable when the limb is flexed. In popliteal aneurism, however, you diminish the pulsation by straightening the limb, but when the limb is flexed it is more distinct. In nearly all cases of popliteal aneurism you find the pulsation increased by flexion. Another symptom, which is here well marked, is the diminution of pulsation below the tumor. This symptom is explained by the "stand-pipe" or "air-chamber" action of the aneurismal sac, the principle of which is applied in the steam fire engine and in the hydraulic ram. The stroke of the valve or piston corresponds to the stroke of the heart, and would cause, unless some means were taken to prevent it, an intermittent flow corresponding to the interrupted flow of blood when an artery is cut. By the elasticity of the air in the air-chamber the pressure is made constant, and the flow is equalized. Similarly, the elasticity of the aneurismal sac, by equalizing the blood-current, diminishes the pulsation in the distal portion of the artery.

The most important diagnostic marks of popliteal aneurism are then:

1st. Expansive pulsation;

2d. Stoppage of the pulsation and lessened tenseness of the sac by compression of the artery above the tumor;

3d. The suddenness with which the pulsation returns when the pressure is relieved;

4th. The thrill;

5th. The bruit;

6th. The diminution of pulsation below the tumor; and

7th. The increase of pulsation on flexing the limb.

In the large majority of cases where mistakes in diagnosis have been made, they have been due to careless examination. The mistake most commonly made is the mistaking an aneurism for a phlegmonous abscess. Even such an experienced surgeon as Pirogoff made this mistake. He was summoned in great haste to see a patient, whom he found to be suffering with an inflamed swelling of the calf of the leg, the tumor presenting many of the symptoms of an abscess. Pirogoff thrust a knife into the swelling, when arterial blood spurted out and revealed the true nature of the case.

As regards the treatment of popliteal aneurism, where there is an opportunity of employing digital compression this method should, as a rule, be fairly tried. If, however, it is found that in a reasonable length of time no progress is made in the cure of the aneurism, and especially if the compression causes increased venous congestion, it should be abandoned, and the femoral artery tied. As at this hospital we can secure a large number of competent assistants, we nearly always make the attempt to cure popliteal aneurism by digital compression, and usually with success. In this case we began compression over the common femoral and the upper part of the superficial femoral artery at 8 o'clock P.M. last Sunday, and it was kept up almost unintermittently for thirty-six hours, but, I regret to say, without good results, though no harm was done. For a time the congestion of the limb was increased, but during the rest which the patient has had since, this has passed away, and he is pretty much in the same condition in which he was when the compression was begun. Possibly the tumor is a little larger than it was a week ago, but it is probably not larger than it would have been had we adopted no treatment whatever. At first I was very doubtful as to the propriety of attempting compression at all in this case, as the tumor was already a very large one, but concluded to give the patient the benefit of the doubt and make the attempt.

This aneurism, as I have already said, is what is ordinarily called a *diffused* aneurism, but which may be better termed, as it would be by Mr. Barwell, a *consecutive* aneurism. Mr. Barwell calls a diffused aneurism one in which the blood extends widely throughout the tissues of a limb. A consecutive aneurism is one in which the blood, though outside of the arterial walls, is still enclosed in an adventitious sac, formed by the condensation of the tissues surrounding the vessel. Here the blood has escaped from the true sac, but the clinical condition is not that of a diffused aneurism, as the blood is still surrounded by a firm wall of cellular tissue. An aneurism may undergo spontaneous cure, and in our treatment we endeavor to effect a cure in the same way as is done by nature. An aneurism may undergo spontaneous cure by the gradual deposition of laminated coagula, a gradual filling up of the aneurismal sac by the deposit of fibrinous matters—whether derived from the wall of the sac or from the contained blood, is still disputed. The clot is usually said to be derived from the blood in a manner akin to the separation of fibrin by "whipping" blood outside of the body, although some authorities believe the laminated coagulum to be produced by proliferation of the sac-wall. This is the most promising mode of spontaneous cure, and it is that which we attempt to imitate in instrumental and digital compression. It is also that which is aimed at in the Hunterian mode of ligation.

There are two modes of tying the artery on the cardiac side of the aneurism; in Anel's method the ligature is applied immediately above the sac, while in the Hunterian method the ligature is tied at a distance from the sac. The latter method is that which is now universally preferred. It is acknowledged to be the most favorable mode of ligation. After ligation by Anel's method, but one set of collateral vessels undergoes enlargement, namely, that which passes around the aneurismal sac itself. By Hunter's method, we have developed one set of vessels around the seat of ligation and one around the tumor. The process of cure by Hunter's method is not, as many suppose, by an entire arrest of circulation in the sac, but by a diminution in the amount of blood which finds its way into the sac, the slow flow of blood allowing a gradual deposition of coagulum in laminæ. In the case of Anel's method, where the blood is cut off entirely from the aneurismal sac, if coagulation occurs, all the blood coagulates at once, making a dark, soft clot, a "currant-jelly" clot, not as promising a mode of cure as that by the formation of a laminated coagulum. We may have a spontaneous cure effected in this way; but such a clot is apt to be redissolved, or may be followed by suppuration of the sac, which may lead to a fatal result. Moreover, when we have a soft clot formed in an aneurism, there is always danger of a fragment becoming detached and causing embolism of a branch beyond the sac, an occurrence which, if it may occasionally prove beneficial, is more often the cause of death. The cure by embolism is attempted in the mode of treatment by manipulation introduced by Sir William Fergusson.

Besides the two modes of ligating the artery on the proximal side of the aneurism, there are two methods of ligation on the distal side of the sac, known respectively as Brasdor's and Wardrop's operations. In Brasdor's method, the whole current of blood on the distal side of the sac is arrested; in Wardrop's operation, the entire circulation through the sac is not arrested, but the amount of blood is limited by tying one or more branches of the diseased artery. Thus, the distal ligation of the carotid for carotid aneurism would be an example of Brasdor's operation; but the ligation of the same vessel for innominate aneurism would be an illustration of Wardrop's. The cure in Wardrop's operation is effected by the gradual deposition of fibrin, just as in the Hunterian method. If we were to tie all the vessels below the sac, we should cut off the entire circulation, and we should be apt to have a soft, currant-jelly coagulum.

In enumerating the principal methods of ligation, I must not omit what is known as the "old operation," or the "operation of Antyllus," though it is really not the operation which Antyllus actually performed. His plan was to tie the artery both above and below the sac, and then cut the aneurism entirely away. As performed at present, the operation consists merely in laying open the sac, and applying ligatures above and below. This operation, which was successfully practised in a number of cases by the late Prof. Syme, is well adapted to cases of traumatic aneurism, but not to those of spontaneous origin. It has been practised on the subclavian, axillary, and gluteal arteries with good results. In one case of iliac aneurism, which was operated on in this way, where Mr. Syme thought he had tied the common iliac, post-mortem examination showed that only the external iliac had been tied. This method is not suited for cases of spontaneous aneurism, as there is apt in these to be disease of the artery in the vicinity of the sac. The circulation is controlled by digital compression, or a tourniquet above the aneurism, or, where this is not possible, as in cases of axillary aneurism, by Mr. Syme's plan of making an incision above the clavicle, and compressing the artery with the fingers over the first rib. In traumatic aneurism, the extent of impairment of the artery is limited, while in the spontaneous variety the extent to which the arterial walls are diseased is unknown, and may render the application of a ligature in this way impracticable. Thus, if we have a traumatic aneurism in the gluteal region, following a stab, we know that the lesion must be within reach, while in a case of spontaneous aneurism in the same situation, we cannot be certain but that the sac extends into the pelvis. If, in the latter case, we should cut into the aneurism, the patient would probably be destroyed by hemorrhage before the artery could be tied. In non-traumatic aneurism in this situation, therefore, it is better to tie the internal iliac than to resort to the old operation.

Another mode in which spontaneous cure is said to occur, is by suppuration of the sac. Sometimes this results from the irritation occasioned by the introduction of foreign bodies into the sac. The introduction of needles, wire, horsehair, etc., aims to produce coagulation, but may, instead, cause suppuration. The method of the introduction of foreign bodies is not to be advised when other methods are applicable; nor, in my judgment, is the treatment by galvano-puncture to be recommended if there is a possibility of effecting a cure by other measures. The galvano-puncture treatment may have its appropriate place in affording temporary relief in some cases, but it seldom, if ever, ends in permanent recovery; and it is, in itself, not unattended with risk.

In the present case we have, as I have already mentioned, given digital compression a fair trial, but it has failed; and to-day I shall ligate the superficial femoral artery by the Hunterian method at the apex of Scarpa's triangle. The ligation was originally performed by Hunter at a lower point, in what is called the Hunterian canal; but the operation in this situation is more difficult, and possesses no advantage except in special cases. When suppuration of the sac occurs, and it is necessary to ligate the artery for secondary hemorrhage, then we tie it in Hunter's canal; but, when ligation is adopted primarily for popliteal aneurism, we tie the vessel in Scarpa's space. We begin the incision in the upper part of the triangle, carrying it downward for from two to two and a half inches parallel to the sartorius muscle. In tying the artery, the safest rule to follow is to feel for the line of pulsation, which, when it can be recognized, is what surgeons practically rely upon. When the pulsation of the artery cannot be felt, then we must follow certain definite, fixed lines; those given by Mr. Barwell being among the most satisfactory. Having turned the limb outward, one line is taken from the middle of the abdomino-femoral fold to the inmost point of the inner condyle of the femur, and then another line is drawn from the anterior superior spine of the ilium, to the junction of the middle and lower thirds of the thigh. Where these lines meet, the sartorius covers the femoral artery, and the incision is made along the inner border of the muscle, so that this point shall be at the middle of the wound. Dividing the skin and superficial fascia, we can recognize the inner edge of the sartorius through the deep fascia, which is then divided along the border of the muscle; drawing this a little outwards, we must avoid a small vein which is often found in front of the sheath, and then remembering that the artery lies to the outer side and the vein to the inner side, we make a small opening in the sheath and pass the aneurismal needle from within outward. Sometimes when the sheath is opened, there is a tolerably free flow of blood, which may lead the surgeon to fear that the vein has been injured; usually this is not the case, the blood coming from the nutrient vessels of the sheath and stopping when the ligature is tightened. If, however, the flow of blood does not stop, the surgeon should separate the vessel half an inch higher up and apply the ligature at that point.

I am sorry to see this muscular tremor in our patient [when he was brought into the amphitheatre after having been etherized]. I have had experience in these cases, and know that this tremor is a very troublesome complication. Muscular tremor is not a complication of much consequence in amputations, where your incisions are bold, but it is very troublesome, and may even be dangerous in an operation of such delicacy as the ligation of a large artery.

In most cases of arterial ligation the ordinary aneurismal needle, with a single curve, is safer and more satisfactory than any other. I have here an ingenious needle with an eye through the posterior as well as the anterior part of its curve. The posterior eye being threaded, when the point of the needle is passed under the artery, it is caught by another instrument which goes into the anterior eye, and which draws the curve of the needle and the ligature through, after the handle has been unscrewed. Sometimes in using the ordinary needle it is better to pass the needle unarmed, and then have an assistant to thread it afterwards.

While the needle lies below the artery, pressure above arrests the pulsation in the tumor, showing that the artery is in the grasp of the instrument; then having passed the ligature around the artery, we must make sure that we have not anything beside the artery included. Formerly, it was the custom to tie the artery and vein together, but now the artery is tied by itself. I secure the ligature with three knots, then fasten the two ends of the ligature together, and allow them to hang out of the wound.

The pulsation now is arrested, and the tumor is much less tense than it was. The wound is closed with sutures, like any other incised wound, after which the limb is carefully wrapped in cotton, so as to protect it from injury, and to keep it warm. There is slight pulsation in the posterior tibial artery. This is by no means unfavorable. I hope that there is enough collateral circulation already established to prevent gangrene.

[The patient did well after the operation, the ligature coming away at the end of two weeks, and the wound slowly healing. When the patient left the hospital, however, the tumor was still somewhat soft, showing that the contained coagulum was not all as firm as would have been desirable, and that the risk of suppuration of the sac had not, therefore, entirely passed away.]

ORIGINAL ARTICLES.

TRACHEOTOMY IN DIPHTHERITIC AND MEMBRANOUS CROUP.

BY FRANK C. WILSON, M.D.,
OF LOUISVILLE, KY.

(*Read before the Kentucky State Medical Society April 5, 1883.*)

It is not my design to review the literature of this subject, but simply to relate two of the cases in which I have performed tracheotomy, together with some observations as to the best methods of conducting the after-treatment in such cases.

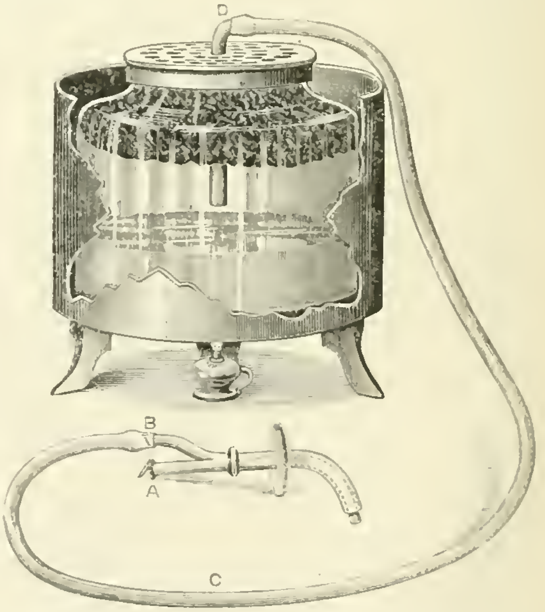
The operation is simple enough, and, if performed with ordinary care, not dangerous.

Case I.—In November, 1881, I was aroused at night to see a little boy, H. M., aged 6 years, who a few days previously had been taken sick with diphtheria involving the nasal passages. A few weeks previously, his little brother had been attended for the same complaint by Dr. Senteny, the family physician, and had so far recovered that it was not thought necessary to visit him.

The parents, recognizing the similarity of the cases, used the same remedies, not deeming it needful to call in the physician until they became alarmed at the development of croupy symptoms. Being in the immediate neighborhood I was hastily called, and at once recognizing the gravity of the case I explained its nature to the anxious parents. I insisted upon having Dr. Senteny sent for at once, and we saw the child several times during the day, one or the other of us remaining with it most of the time. It continued to grow worse in spite of the treatment pursued, which consisted of insufflation of powdered sulphur, and of pepsin, together with the internal administration of quinine, chlorate of potash, tincture of iron, etc.

The obstruction at last became so great that cyanosis supervened and death seemed imminent. I had previously made all necessary preparations for tracheotomy, and having gained the free consent of the parents, proceeded to perform it about one o'clock on the second night. The hemorrhage from the greatly congested vessels of the neck was alarming, and much valuable time was lost in efforts to staunch the flow of blood, before making the incision into the trachea. This was at last accomplished, and the incision into the trachea made, but the coughing and struggling, which the first entrance of air always induces, started with increased violence, the alarming hemorrhage. However, turning the child on one side, no inconvenience was occasioned by the hemorrhage, and the tube being soon introduced, it was easily controlled. The breathing became at once natural and easy, and the cyanosis, before so marked, rapidly disappeared. A large sponge was placed in front of the neck over the tube and kept constantly moist, so as to filter the air and at the same time moisten it. The inner tube required cleansing every four or five hours, and a supply of oxygen was kept constantly on hand, to be used should cyanosis supervene at any time. He was faithfully nursed by his father, and to his watchful care during the after-treatment, no doubt, is greatly due the successful issue of the case. The tube was removed at the end of one week, the opening closed in about twelve or fourteen days, and recovery was complete.

Case II. *Membranous Croup. Tracheotomy on the third day, death on the sixth day.*—F. M., aged 4 years, was out riding, insufficiently clad, and upon reaching home complained of being cold. During the night became hoarse and croupy. I was called the next morning and found considerable obstruction, both in expiration and inspiration, with a clear, ringing, croupy cough. I prescribed turpeth mineral to be used in three-grain doses to produce emesis, whenever necessitated by increasing obstruction; otherwise, in one-half grain doses at intervals of six hours with chlorate of potash in solution at short intervals. The second night he rested a little more comfortably, but there was never entire relief from the croupy cough, and the next night the obstruction became so great as to be alarming. Early in the morning, Thursday, the cyanosis became so marked that I proposed tracheotomy, and having asked for a consultation, Dr. Hewitt was called. Having in the mean time made all preparations, death seeming imminent, I inserted the tube about 9 A.M., there being very little hemorrhage and the membrane not extending below the opening. The breathing immediately became easy and full, and the cyanosis quickly disappeared. The sponge was placed over the tube and the air of the room kept moistened by steam. The case progressed favorably until Friday; about midnight, I noticed that the tube filled with inspissated mucus at short intervals, requiring to be frequently cleansed. After a while even cleansing the inner tube failed to relieve the obstructed breathing, the obstruction being evidently lower down in the trachea and bronchial tubes. Thinking that possibly the dried mucus might have accumulated upon the lower end of the outer tube, that too was removed and cleansed. but still the obstruction remained. A spray of bromide of potash solution was then used with a view of dissolving the mucus. This afforded some, but only temporary, relief. Oxygen was also resorted to with the hope of prolonging life until the membrane in the larynx might separate and be expectorated. I even endeavored to hasten this by passing a sponge probang saturated with a solution of bromide of potash into the larynx, but failed to dislodge the membrane. The tracheal and bronchial obstruction gradually increased until death supervened, just three days after the operation. I remained with this case almost continuously day and night, from the time of the operation until death. Watching it thus closely caused me to realize, as I had never done in my previous cases, the danger of breathing cold, dry, and dusty air directly through the tube into the lungs, and the necessity of imitating as closely as possible the natural air-passages, which filter, warm, and moisten the air before it reaches the lungs. I believe in this case death was due solely to the inspissated mucus accumulating in the trachea and bronchial tubes. To obviate this, and at the same time imitate as nearly as I could the natural passages, I have arranged a respiratory apparatus shown in the figure. It consists, first, of a silver canula provided with two branches, in one of which a valve opens outwards, A, and in the other a valve opens inwards, B. A rubber tube, C, leads from the canula whose valve opens inwards to a jar, D, filled with fine sponge, so arranged that the air has to pass through the sponge which can be kept moist and warm by placing the jar in a vessel of water heated by a lamp. Thus the air breathed will be warm, moist, and free from dust, and can, if desired, be medicated at the



same time. The expired air and the secretions, coughed out through the tube, find exit through the canula whose valve opens outwards. I am firmly convinced that the use of some such arrangement will obviate or greatly lessen the chief danger to which such cases are liable after tracheotomy, and to which is due the great mortality attending the operation. Were the operation rendered thus more successful; we would see fewer cases consigned to their inevitable doom, by the opposition of parents and friends.

Louisville, Ky., April, 1883.

FOUR CASES OF PORRO–CÆSAREAN SECTION

AT THE ALLGEMEINE KRANKENHAUS, OBSTETRICAL DEPARTMENT, VIENNA.

By X. O. WERDER, M.D.,
of Pittsburg, Pa.

As I had the very rare opportunity to see four cases of Cæsarean section performed within two weeks, one in Prof. Gustav Braun's division, and the others in Prof. Carl Braun's clinic, I think it of sufficient interest to give the readers of The Medical News a brief history of the cases and a short description of the operations.

Case I.—April 19th. This woman was about thirty-five years of age, very anæmic, badly nourished, and of a phthisical diathesis. She was delivered of her first child about two years ago, her labor being then very difficult, but normal. During the last one and one-half years she has been suffering with osteomalacia in a very high degree. Labor set in a little prematurely, as she had only passed her eighth lunar month; pains commenced during the night from the 18th to the 19th of April, but she was not admitted to Prof. Gustav Braun's division until about one hour and a half before the operation was commenced. On examination her pelvis was found to be very much contracted, both in the antero-posterior and in the transverse diameters, but especially in the latter, as is usual in such cases, it being caused by the lateral pressure of both lower extremities against the acetabulum in walking. The conjugate diameter measured only four centimetres, instead of thirteen, in a normal pelvis, and the circumference of the pelvis seventy-six centimetres, instead of ninety. The pelvic outlet was extremely small; it was very difficult to introduce two fingers through it. The pubic arch projected like an angle. It is very evident that in such a case there is not only not the slightest chance for a normal delivery, but even a craniotomy cannot be thought of; nothing short of a Cæsarean section can here be considered.

Preparatory to the operation her abdomen was washed and brushed with soap and water and then rubbed off with a five per cent. solution of carbolic acid, and the hair of the pubes shaved off while she was being placed under the influence of an anæsthetic, the usual one in Vienna being a mixture of ether, chloroform, and alcohol. A well-disinfected oilcloth having in its centre an oval opening large enough not to interfere with the operation, was then placed over her abdomen, and through this open space the incision in the linea alba extending from the symphysis pubis to the umbilicus was made, and layer after layer carefully divided until the peritoneum was exposed, which was then opened upon the director. The uterus now filled up the whole incision, the latter was found a little too small, however, for extracting the child; it was, therefore, extended about two inches above the umbilicus. As soon as every bleeding vessel was secured by an artery forceps, the uterus itself was opened with a few bold cuts with the knife, and without regard to the very profuse hemorrhage, the operator thrust his hand into the cavity of the uterus and extracted the child, giving it in charge of an attendant, while the assistants with their hands compressed the edges of the uterine wound, in order to stop the excessive hemorrhage. The uterus was then pulled out of the abdominal wound, an écraseur was passed around it closely to the edge of the incision and this was tightened to its full extent, thus controlling the alarming hemorrhage; about one inch and one-half above the chain of the écraseur the whole uterus was amputated with the knife. In spite of such decided pressure around the stump of the uterus, there was still some blood oozing out; this was stopped by compressing each bleeding point by a Bozeman forceps. The abdominal cavity was now sponged and cleaned out; very little blood had entered it, however, as the abdominal wound had been drawn closely to the sides of the uterus, thus protecting the peritoneum as much as possible. The deep peritoneal sutures were now applied, for which purpose silver wire was used, which was tightened by a small lead-plate and shots, the so-called button suture, over this the superficial suture with simple carbolized silk was made uniting the upper part of the uterine stump to the wound, after it was pressed against the symphysis pubis as much as possible. After the abdominal wound was closed, the pedicle was thoroughly cauterized with the thermo-cautére and then dusted over with iodoform. Iodoform gauze was then tightly packed around the stump still included in the chain of the écraseur, which is to be kept on until the pedicle sloughs off, which generally takes place about the tenth or twelfth day; the rest of the wound was covered very lightly with the same material Over this a piece of silk was placed, on top of this antiseptic cotton and a mackintosh, a large linen bandage reaching all around the body finished the dressing.

The child cried immediately after the extraction, and though not of full term, is thriving pretty well. The mother succumbed to the operation on the end of the third day; the exact cause of death I could not ascertain.

Case II.—April 25th. Prof. Carl Braun's clinic. This woman was a strong, vigorous primipara, twenty-three years of age; at the end of the tenth lunar month of pregnancy. She has been subject to rachitis in her early childhood, and as a consequence of which she has now a pelvis contracted in all its diameters. The conjugate diameter is only 6 cm., instead of 11 in a normal pelvis; the right oblique diameter 5 cm., instead of 11¾. and the left 4 cm. The circumference of the pelvis measures 78 cm., instead of 90; the distance between both anterior superior spinous processes of the ilium 20, instead of 25 cm.; distance between the highest points of both crests of the ilium 23 cm., instead of 28; distance between the trochanters of the femur 28 cm., instead of 32. The fœtus was very well developed and estimated to weigh about 3500 grammes (it actually weighed 3350 grammes). An ordinary fœtus could never be born through such a small pelvis, even after craniotomy, which would even be too small for a fœtus of only 1500 grammes; there was, therefore, no alternative in this case but to perform Cæsarean section. The patient having been under observation for about two weeks, it was preferred to do this a few days before labor was expected, because the pains would not only be a very undesirable complication to the operation, but the damage very likely to be done by them to the cervix by bruising and tearing it, should be avoided if possible.

The operation as performed by Prof. Carl Braun, was very similar to that of Prof. Gustav Braun. The preparatory proceedings in regard to washing and sponging of the abdomen, catheterizing the bladder, etc., were exactly the same, but the incision in the linea alba was made a little higher up in this operation. For, while in Case I., the incision extended down to the symphysis pubis, and only about one and one-half to two inches above the umbilicus, Prof. Carl Braun commenced it about one to two inches above the symphysis and carried it up higher above the umbilicus, so that about two-thirds of the incision were below and one-third above the umbilicus, the reason of this being to prevent any injury being done to the bladder. After the peritoneum was opened and the bleeding vessels controlled, he did not cut into the uterus immediately, but pulled the entire uterine tumor out from the abdominal cavity, protected the intestines with large abdominal sponges, and had the edges of the wound drawn together by an assistant. A long elastic tube was now applied very tightly around the neck of the uterus for the purpose of controlling the enormous bleeding, by which the incisions into the pregnant uterus are followed, the écraseur was also passed around it, but not tightened. These preparations completed, the entire uterus was opened by a few quick incisions, and the living child extracted, while an assistant closed the écraseur tightly around the womb. The amputation of the uterus, the closing and dressing of the wound, and the extra-peritoneal treatment of the pedicle were exactly the same as in the first operation, only with this difference, that the whole stump was united to the abdominal wound, all around it, by a number of sutures, not the upper part of it only, as done by Prof. Gustav Braun.

CASE III.—April 26th. Prof. Carl Braun's clinic. This patient, an idiot, was also a primipara, thirty-two years of age, well nourished, and at the end of the tenth lunar month of pregnancy; she had a rachitic pelvis, deformed and contracted in all its diameters, similar to the previous case, nearly all the measures and diameters being of about the same length.

Conjugate diameter (vera) 6 cm., instead of 11.

Conjugate diameter (diagonalis) 8 cm., instead of 13.

External conjugate 17 cm., instead of 20 cm.

Distance between ant. sup. spinous process of ilium 21 cm.

Distance between highest points of both crests of ilium 25 cm.

Distance between both trochanters of the femur 28 cm.

Circumference of pelvis 80 cm.

The whole pelvis had a kidney-shaped form, it being contracted in the highest degree in its antero-posterior diameter. The child was not as well developed in this case as in the previous one, its weight being estimated to be from 2500 to 2800 grammes. The indications for the Cæsarean section were, of course, just as decided as in Case II. The operation did not differ from the last one, but after cutting off the uterine circulation by an elastic tube drawn tightly around the lower part of the uterus, as was also done in the foregoing case, there was some little delay before the child could be extracted, as a consequence of which the child in utero, being without the mother's nourishing fluid, was forced to respire, and, in so doing, aspirated some of the amniotic fluid. It was, therefore, asphyxiated when it was born, though it made several efforts to breathe and cry, which only served, however, to drive this aspirated fluid still further down into the bronchial tubes, filling them up, and mechanically preventing the air from entering them. In spite of all the care and attention paid to it, it died a few minutes after its birth.

CASE IV.—May 1. Prof. Carl Braun's clinic. This case was very similar to the first one. The woman is forty years of age, suffering with osteomalacia in such a degree that she has not been able to walk for a long time. She generally lies in a horizontal position, with her thighs flexed upon the abdomen. When she entered the obstetrical wards about six weeks ago, she was very badly nourished, and in a very weak condition, but, since then, she has improved very much, because, preparing her for this operation, everything has been done to raise her nutrition, and to bring her system into such a condition as to be able to withstand such a serious operative procedure. She was delivered of a child, with the forceps, about ten years ago, and since then she has had an abortion. This pelvis is contracted most intensely in its transverse or oblique diameters, as in the first case, and the symphysis pubis is again very much elongated and projecting. The oblique diameters, both right and left, are only four cm. instead of eleven and three-fourths; the pelvic inlet is also of the same size. In such cases, of which Prof. Carl Braun has not seen more than about ten in his thirty years' experience, at least where the deformity of the pelvis was so pronounced, he has always performed Cæsarean section, though it has been suggested by some authors that, the bones being so soft, porous, and yielding, an extraction of the fœtus through the pelvic outlet could be made without injury to the mother. This, however, he regards as more than doubtful, and thinks it safer to deliver the child by laparotomy, especially as this operation has lately given such good results.

The operation was performed in the same way as before, but learning from the experience in the last case, the elastic tube was not drawn tightly around the cervix until the operator was ready to make the incision into the uterus, as a consequence of which he extracted a living, crying child. The placenta was inserted just in the line of incision, so that it had to be cut through before the cavity of the uterus was reached; this caused a little more hemorrhage than usual.

Remarks.—It is proper to mention here that all the four operations were performed strictly antiseptically in every respect, though not all of the minutiæ of Lister's dressing were observed. The spray was used in the operating-room before, but not during the operation.

The result of the first operation has been stated above: death ensued on the third day; whether due to the operation, or to her weakened condition and tuberculous diathesis, or both, I could not ascertain. More fortunate was Prof. Carl Braun with his three cases: they are all on the road to recovery. The first case did not have the slightest rise of temperature, and was feeling remarkably well, until the end of the third week, when apparently without the least cause, she was suddenly attacked with phlegmasia alba dolens. The affection is, however, getting better rapidly, and she will, in all probability, be soon restored to health.

The third case, an idiotic girl, as has already been stated, was getting along equally well in every respect, but her suture having been removed on the eighth day, she succeeded, in one of her wild hallucinations, in tearing apart the slightly adherent surfaces of the abdominal wound, so that the whole larger omentum was hanging out of the wound. Prof. Carl Braun returned this into the abdominal cavity, but did not find it advisable to pare the edges of the incision, and to reunite it; he simply drew them together by strips of adhesive plaster, after having it thoroughly disinfected with iodoform. In spite of this very unfortunate accident, Prof. Braun regards her prognosis as a very favorable one, and is of the opinion that the wound will close and heal perfectly by granulation, though it will probably require several months to do so, instead of a few weeks.

The second patient with osteomalacia, the most unpromising case of the four, was the most fortunate after the operation. Her convalescence has not been interrupted at any time by any unfavorable symptom, so that she will soon be able to leave the hospital. The original disease—osteomalacia—does not seem to trouble her very much at present; she can move her lower extremities now with perfect freedom, and does not suffer any pains. She is very happy and satisfied with her condition, and states that she has not felt as well as now since the beginning of pregnancy.

The children are all living and well, except the one mentioned who died immediately after birth.

The operation itself is that recommended by Porro, and known under the name of Porro's operation, who was followed in all these four cases in every particular, if I be not mistaken. The results of Cæsarean section since the introduction of this method here in Vienna have been very good; not more than about thirty per cent., perhaps less, of those who have been operated upon here since have died. A modification of Porro's operation, as suggested by Schrœder and others, was tried in two cases by Prof. Gustav Braun. Instead of cauterizing the stump of the uterus with the Paquelin cautery, and treating it extra-peritoneally, he united the mucous membrane of the pedicle by sutures, so that the wound was entirely closed, and returned it into the abdominal cavity—in other words, he treated it in the same way as is generally done after ovariotomy. The results, however, were disastrous, for both patients died a short time after the operation, and, on the autopsy, the whole abdomen was found full of blood, though the wound of the stump in the last case had been united by over thirty sutures.

These hemorrhages are not hard to explain, if it is considered that the tissues included in these sutures are muscular and contractile, very unlike to the pedicle of ovariotomy, and that, in shrinking, the sutures become loose.

The successful results with which Porro's operation has been accompanied are, in my opinion, very encouraging, and, if not everything deceives me, it will have a brilliant future. I hope that the time is not very far off when it will supersede a very unscientific, unsurgical, and detestable obstetrical operation—craniotomy—at least in all those cases in which a living child is at stake.

Vienna, May 25, 1883.

MEDICAL PROGRESS.

The Functions of the Spleen.—There can be no doubt in the value of the spleen in the process of the formation of blood, but it would be difficult indeed to add anything very novel to what has already been conjectured in this matter. It has long been decided that the spleen is not an organ absolutely essential to life. Some fresh experiments bearing on the subject of the functions of the spleen have been instituted by Prof. Zesas. The spleen was removed from many rabbits, and the animals were afterwards killed at intervals varying from one to seventeen weeks. The healthy formation of blood is known to be disturbed for a time after the extirpation of the organ in question; the white corpuscles are increased in number, while the red disks are diminished. Zesas found that the lymphatic and thyroid glands, with, perhaps, the liver, take on the functions of the spleen. He also came to the conclusion that the removal of the thyroid gland, as well as the spleen, prevented the proper re-establishment of normal hæmopoiesis. The spleen is therefore believed by Zesas to be concerned in the conversion of the white blood-corpuscles into red ones.—*Lancet*, June 23, 1883.

The Parasites of Marsh Fevers.—Dr. Laveran, of the Val-de-Grâce, in a communication to the Paris Hospital Society (*Union Méd.*, June 12 and 14), states that the observations which he formerly made in Algeria as to the presence of well-defined parasitic organisms (which he describes at length) in the blood in marsh fevers have been fully confirmed by subsequent researches. Their pathogenetic character has been proved by a large number of facts which enable him to come to these conclusions: 1. These parasitic elements exist always in the blood in cases of impaludism; and even when the examination of the blood of the living does not always exhibit them, they are still always to be found at least after death in the capillaries of the spleen. 2. They are always found in direct ratio with the severity of the case. In individuals who succumb through some complication in simple intermittent they are found only in small numbers in the liver and spleen; but in those who die from pernicious fever they exist in large numbers in all the organs and vascular tissues. 3. They precede a paroxysm of the disease, and when they are found in the blood we may almost certainly predict that a paroxysm is about to occur, although no elevation of temperature or other morbid sign exists. 4. These elements are never found in diseases unconnected with impaludism. 5. These elements disappear rapidly under treatment by quinine.—*Med. Times and Gazette*, June 23, 1883.

CONGENITAL DIVERTICULUM OF THE LEFT VENTRICLE.—A rare and curious example of cardiac abnormality has been recorded by Dr. Gibert, of Havre (*Progrès Méd.*, June 9th), as occurring in an infant who lived to the age of ten months. The child was born with a ventral hernia, the abdominal wall being defective in the middle line from the umbilicus upwards. A large pulsating vessel was noticed to be present together with the hernia, and as time went on, this vessel increased in size, till, at the time of death, it was as large as the finger. On examination, it was found that the diaphragm was also defective, so that the pericardium opened into the peritoneal cavity, and projecting into the abdomen was a pouch-like diverticulum, connected with the apex of the left ventricle, with muscular walls, and internally marked by fleshy columns like the ventricular cavity itself. This diverticulum was thirty-eight millimetres in length, and shaped like the finger of a glove. Dr. Gibert suggested that the non-closure of the ventral wall was probably due to the presence of this cardiac deformity; but the converse hypothesis, that the pouching of the ventricle depended on the defect of the diaphragm and abdominal wall, seems to be held by Dr. R. Blanchard, who made a further dissection of the specimen, for he speaks of it as being the congenital formation of a kind of true infundibular form of aneurism of the apex of the left ventricle—"a fact the more curious, because at that period of life the left ventricle only plays a very subordinate part, and this protrusion of a portion of its wall cannot, therefore, be attributed to an excess of internal pressure." However, we are not aware that in any recorded case of pericardial deficiency a similar ventricular aneurism has been observed. Dr. Peacock, who refers to several cases of defect of the pericardium, including the classical one referred to by Baillie, makes no mention of such an abnormality in his work on *Malformations of the Heart.* In cases of ectopia cordis, the organ is generally misplaced in whole or in part; one case mentioned by Dr. Peacock as having been published by Dr. O'Bryan most resembles Dr. Gibert's, for in it a portion of the left ventricle protruded through a triangular aperture at the anterior and upper part of the abdomen, produced by the absence of the xiphoid cartilage, and the fibres of the diaphragm inserted into it.—*Lancet*, June 23, 1883.

THE INFLUENCE OF THE ELECTRIC LIGHT ON THE HUMAN EYE.—In discussing the value of any particular source of artificial light, says PROF. MAUTHNER (*Wien. Allgem. Med. Zeit.*, No. 10, 1883), three qualities must be especially regarded: 1. The steadiness of the light; 2, the strength of the light; 3, its composition. From its complete failure in point of steadiness, the arc-light must be at once rejected from the category of lights suitable for the human eye. The incandescent light, on the other hand, deserves a prominent—if not a leading—position. As regards its strength or intensity, also, it fulfils all requirements, since it can be modified or intensified at will. The composition of the lights habitually used hitherto has shown a preponderance of yellow rays. In the electric light, however, the short-wave rays predominate—*i. e.*, the violet rays. To the human retina, blue or violet tints are more agreeable than yellow, and hence from its composition, as well as from its steadiness and adaptability, the light of the incandescent lamp is especially adapted for the use of the human eye. Distinctness of vision and the perception of color are both increased under the electric light—facts which might be theoretically held to involve an overstrained retina. Such a theory is not, however, borne out by practical experience; it is only where the light employed is unsteady that any ill-effects have been observed. It may be considered as an established axiom that the brilliancy and composition of any light are as nothing in respect of its value as an illuminating medium for ordinary uses, compared with its constancy and steadiness. In the incandescent lamp, no combustion takes place, and hence no consumption or vitiation of atmospheric air is induced. From a theoretic point of view, therefore, no objection can be raised against the use of the incandescent electric lamp: its full value as an illuminator is probably not yet ascertained.—*London Med. Record*, June 15, 1883.

WOUNDS OF THE VAGUS NERVE.—The following case is of interest in relation to the question of the possible effects which may follow division of the par vagum on one side of the neck. The patient was a man aged forty-nine years, the subject of a tumor in the neck of long duration, which, in the course of eight weeks, rapidly increased in size, induced much pain, and was associated with marked emaciation (*Berliner klin. Wochen.*, No. 21). The tumor occupied the left side of the neck, displacing the larynx to the right; it was of the size of two fists, but little movable, and was crossed by large veins. No signs of pressure on the vessels or nerves were detected. The lungs yielded no physical signs of disease. Notwithstanding the connections of the tumor, its removal was decided upon. Much difficulty was encountered in the course of the operation. The internal jugular, being adherent to the tumor, was ligatured and divided. The vagus nerve was apparently much displaced, for it was divided under the notion that it was the descendens noni. Later on in the operation the vagus was again cut through, so that a portion of it, about six inches long, was removed. After the operation, the pulse was 120. Some râles could be heard in the left lung, and the left vocal cord was paralyzed. Six hours later the pulse was 90; the respirations were 30. After this the patient did fairly well till the tenth day, when fever set in; and on the twelfth a rigor occurred, which was repeated the next day. The patient died on the fourteenth day, only a little purulent sputa having been coughed up. At the autopsy, some broken-down blood-clot was found at the site of each ligature on the internal jugular vein, but not an extensive thrombosis. The muscles of the left vocal cord were already in a state of fatty degeneration. In the bronchial tubes of the left lung only purulent matter was seen; the right lung was œdematous and congested, but there was no bronchitis. The brain and the heart showed no morbid signs. Dr. Riedel, who had performed the operation, regarded the unilateral bronchitis and disease of the left vocal cord as directly dependent on the removal of the large piece of the left vagus nerve in the neck. The pyrexia and the rigor which ushered in death were looked upon as probably of embolic origin, though there was no post-mortem evidence to substantiate this view—*Medical Times and Gazette*, June 23, 1883.

Prevention of Infantile Diarrhœa.—The *Bureau d'Hygiene* of the City of Rheims, France, in July of last year, made a slight change in the form of death-report required in cases of infantile diarrhœa, which has been productive of very instructive results. Children dying from this disease were divided into two classes—those nourished by mother's milk, and those brought up by hand. From July 1st to December 31st, thirty-one infants nourished at the breast and two hundred and seventy-two brought up *au biberon* died of infantile diarrhœa. "This teaches us nothing new," says M. Langlet, in his annual report; "but it is one of those truths which cannot be too often recalled."

To place the true value on M. Langlet's facts, we should know the relative proportions of the two classes of infants. However, it can hardly be supposed that the bottle-fed children are to the nurslings as nine to one.

Alum in the Treatment of Phthisis. — Many physicians, both on the Continent and in some of our colonies, as well as at home, accept the doctrines of Koch without question. One of the natural consequences of this acceptation is the search after some remedial agent which shall possess the capacity of checking the growth of the micro-parasite which is the reputed chief etiological factor of the disease. Dr. Julius Pick has put on record the results of his experience in this matter with the preparations of alum (*Wiener med. Wochen.*, No. 19). The author seems to consider that he has proved that the benefits which accrued from the employment of these therapeutical agents were marked, and all that could be desired. The outlines of one case, which was diagnosed to be tuberculous infiltration of both lungs, chiefly at the apices, are faithfully recorded. At the beginning of January of this year the treatment was commenced, and consisted of an inunction with fat, performed twice daily over the whole body, of a diet composed of bread and milk, together with the internal administration of a pill three times a day two hours after food. This pill consisted of a quarter of a grain of metallic aluminium, a grain and a quarter of undried alum, with the same quantity of pure carbonate of lime. After eight days the diarrhœa ceased, the appetite improved, the fever abated, and the night-sweats became less. Notwithstanding this favorable progress, the composition of the pill was somewhat altered; instead of the undried alum, the same dose of an extract of the malate of iron was substituted, and some extract of taraxacum was used to make up the preparation. Two of these pills were prescribed in the morning, three at midday, and two at night. The inunction with fat was proceeded with. It need hardly be said (for the case would scarcely have been published else) that the physical signs and symptoms of the disease gradually diminished to a practical zero. The correctness of the original diagnosis is of course taken for granted. The above sketch is a fair representation of the illogical mode of thought current among not a few medical men.—*Med. Times and Gaz.*, June 23, 1883.

Resection of the Pylorus.—Dr. Van Kleef performed this operation, in January last, upon a woman who had stenosis, due to ulcer. The recovery took place without accident, and by the latter part of May the patient's weight had increased thirty pounds.—*Gaz. Degli Ospitali*, May 27, 1883.

Paralysis of the Oculo-motor Nerve during Menstruation.—At a meeting of the Society of German Physicians in Prague on March 2 (*Wiener Med. Blätter*, March 15), Prof. Hasner showed a case of periodical paralysis of the left oculo-motor nerve, occurring along with menstruation. The patient, a girl, aged 17, was perfectly well until the first beginning of menstruation, when paralysis of the left eyelid appeared on the first day, and lasted, gradually improving, until the third day, when it disappeared with the cessation of the menses. This recurred at every menstrual period. The case seems to be unique, and Prof. Hasner considers it to depend on hyperæmic pressure in the region of the root of the left oculomotor nerve.—*London Med. Record*, June 15, 1883.

Post-hemiplegic Disorders of Movement.—A valuable communication on the above subject by M. Demange will be found in the May number of the *Revue de Médecine;* it is based on a study of eleven cases, of which nine proved fatal. In each of these an autopsy was made, and a drawing is given of the morbid appearances found in the brain. The cases are all very well reported except in one particular, and that is, that from first to last there is no mention of the ophthalmoscopic appearances in any of the patients. In this respect, however, M. Demange does not differ from his compatriots, for we may say, without fear of contradiction, that it is quite exceptional to find any note as to the state of the optic disk in the cases published in the various French journals. Notwithstanding this omission, however, the paper constitutes a distinct advance in our knowledge of the different varieties of post-hemiplegic movement. These movements, according to the author, may be divided into two groups—in one they supervene spontaneously, apart from voluntary movements (of this kind are hemi-chorea, hemi-athetosis, and hemi-paralysis agitans); in the other groups the movements are produced only during the performance of voluntary acts (of this kind are hemi-ataxy and hemi-tremor of the type of disseminated sclerosis). These movements may coincide in the same patient, or they may succeed one another. In all the patients, of course, there was hemiplegia, and in all there was hemi-anæsthesia. As regards the lesions found, in one it was almost confined to the posterior segment of the internal capsule (case of hemi-chorea); in six cases the lenticular nuclei were affected (in some of these the internal capsules were also involved, in others the optic thalami—one case of hemi-paralysis agitans, four cases of hemi-athetosis, and one of hemi-sclerosis disseminata); twice the lesion was cortical and subcortical, at the region of the motor convolutions, the central ganglia being quite normal (one case of hemi-athetosis and one of hemi-ataxia). No special seat, then, can be assigned to the lesion, judging from the form of the trembling. The anatomical condition which gives rise to the production of the trembling would appear to be the irritation of the motor fibres at any point of their course, whether in the internal capsule, the lenticular nucleus, optic thalamus, or motor convolutions, and the form of the trembling would, in the author's opinion, be dependent, not upon the seat of the cerebral lesion, but upon the state of the muscles of the paralyzed side—muscles whose tone and contractility vary according to the patient, the duration of the hemiplegia, and the state of descending degeneration of the pyramidal fibres. The author sums up the conditions necessary for the production of these movements as follows: 1. The hemiplegia must not be flaccid and complete. 2. The secondary contraction must not have given rise to an absolute rigidity. The paper concludes with some remarks on bilateral hemiplegia due to symmetrical cerebral lesions.—*Med. Times and Gaz.*, June 23, 1883.

JABORANDI IN HEART DISEASE.—PROF. RIENZI has used powdered jaborandi, grs. xlv–ʒiss during the day, in two cases of aortic insufficiency with endarteritis. serous expectoration, dyspnœa, painful palpitations, frequent and quick pulse, and murmurs at the base of the lung. After a few days' treatment, the sounds were lessened, the pulse was less frequent, and the painful palpitations had ceased. At the same time there was quite profuse sialorrhœa, and increased intestinal secretions. He believes that jaborandi has a double action, in regulating and sustaining the energy of the cardiac contractions, and in increasing the excretions from the economy. From this double action he deduces its utility in cases of failure of energy in the contractions, and in cases in which there are œdema and congestions. —*Cronica Medico-Chirurgica*, May, 1882.

TREATMENT OF PHTHISIS WITH IODOFORM.—Since Semmola's communication on the use of iodoform in phthisis to the International Medical Congress in Amsterdam, his experiments have been repeated, and with satisfactory result. Ciaramelli, De Renzi, Fasano, and other Italians have confirmed his statements (*Lo Spallanzani*, January and February, 1883). Iodoform acts in phthisis and chronic bronchial catarrh as an anæsthetic, antiseptic, and alterative. The best results are obtained in incipient phthisis, which is often cured. In advanced cases this remedy is very useful, lessening expectoration, moderating the accesses of cough and fever, and arresting the progress of caseation—in a word, prolonging the patient's life. Iodoform has been used by inhalation, either by rubbing the patient's chest with an iodoform ointment, or by making him inhale essence of turpentine containing iodoform in solution. This method, though most rational, is so largely objected to by patients and their friends because of the disagreeable smell of the iodoform, that it cannot be extensively used. Or it may be given in a pill with extract of gentian or other extract, beginning with one grain a day, increasing the dose as toleration is acquired to six or eight grains a day.—*London Med. Record*, June 15, 1883.

ICHTHYOL.—UNNA (*Deutsche med. Zeitung*, Nov. 17, 1883, and *Monatsschr. für Prakt. Dermat.*, Nos. 11 and 12, 1882) has used with great success a new bituminous substance containing a large amount of sulphur, and to which the name of ichthyol is given. It is partially soluble in alcohol and ether, and perfectly soluble in these combined. He recommends its use (10 per cent. with vaseline) to paint on the joints in acute rheumatism, which should then be wrapped in wadding; he says it gives immediate relief from pain. He uses stronger ointments (20 to 30 per cent. in vaseline) in chronic rheumatism, lumbago, and neuralgia. He recommends it to be inhaled with steam, a tablespoonful to one or two litres of water; or to be sprayed on the throat, 5 per cent. dissolved in equal parts of ether and alcohol. He uses 1 per cent. watery emulsion in the early stages of gonorrhœa as an urethral injection, and he thinks very highly of it in eczema in 50 per cent. ointment with vaseline for adults, and 20 per cent. for children. In nascent eczema he begins with 20 per cent., and later on uses 10 per cent. He has found great advantage in obstinate eczema from an ointment made by boiling 10 parts of litharge with 30 parts of vinegar until 20 parts remain, and then adding 10 parts each of olive-oil, lard, and ichthyol.—*London Medical Record*, June 15, 1883.

EPIDEMIC PNEUMONIA.—An interesting epidemic of croupous pneumonia, which seems to point to its infectious character, is the subject of a paper by DR. HEINRICH SCHMIDT, of Königsbrunn, in the *Berliner klin. Wochenschrift*, No. 23. The outbreak occurred at Zang, a village of 549 inhabitants, situated on the Aalbuch, and surrounded by woods. The inhabitants are hard-working, and their food is coarse and frequently scanty. The water-supply is bad. Typhoid fever occurs only sporadically, and ague is unknown. An epidemic of measles occurred amongst the children in the month of March, 1882. Ordinary croupous pneumonia occurs pretty frequently. A case of pneumonia occurred on April 5, which, however, does not belong to the epidemic under notice. The first case of the epidemic occurred on May 11, and between that date and June 18 seventeen cases occurred. On July 10, a case of pneumonia also occurred, but this was not part of the epidemic. Two of the cases ended fatally, and four ran an abortive course. The cases all occurred in neighboring houses. Six cases occurred in a very poor family, whose hygienic surroundings were very bad. The period of incubation seems to have been in most cases about five to eight days. The weather in May was cold, but warm in June. Most of the epidemics of pneumonia have been described as occurring in closed places, usually institutions or prisons. Kerchensteiner observed an outbreak of pneumonia which spread like an epidemic, and was of a typhoidal character. The overcrowding of the sleeping apartments he considered as a most favoring circumstance. Inoculation of animals with the blood of these pneumonic patients gave no result. Penkert, in the *Berliner Wochenschrift*, Nos. 40 and 41, 1881, described an epidemic occurring in a small place of about 700 inhabitants. He considered that the infectious material had been carried from a neighboring churchyard by the wind to a school where the first twelve cases occurred, and that the disease afterwards spread from person to person. The epidemic was of a mild character, differing from most epidemics described. The *Deutsche Vierteljahrsschrift für öffentliche Gesundheitspflege*, 1882, Bd. ii., pages 366 and 367, mentions an epidemic comprising seven cases occurring in Uster, three of which ended fatally. The cases were described as typhoidal pneumonia. In Börner's *Jahrbuch der practische Medicin*, 1882, p. 239, an epidemic is mentioned by Schwede and Münnick. It comprised fifteen children out of fifty, and occurred within thirteen days in a small village, whilst in the neighborhood no case occurred. Epidemics of pneumonia have been noticed in garrisons—in the First Army Corps, at Königsberg, Dantzic, and Grandenz, commencing in January, 1875, and ending in July, 1875. Another epidemic occurred in the Fourth Army Corps in the winter of 1875 and 1876. The symptoms in both epidemics were almost the same—prodromata, with various general symptoms, high fever, and at the commencement no distinct local signs in the lungs; next, severe head-symptoms, and profound prostration of strength; then local mischief in the lungs, and with it increased rise of temperature; no true crisis, or only after the seventh day, then diarrhœa. Very frequently there was considerable swelling of the spleen and liver, with slight jaundice, marked and rapidly occurring heart-failure.—*Medical Times and Gazette*, June 23, 1883.

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SATURDAY, JULY 14, 1883.

THE GRIEVANCES OF THE PLUMBER.

THE master-plumbers of the United States have held a National Convention in New York, in which they have duly considered their troubles, and the causes and remedies for the same.

Their grievances, as set forth in the address of Mr. Remick, of Philadelphia, which seems to have been accepted as an exposition of the views of the convention, are as follows: "It is a general feeling among plumbers all over the country that the tone of our trade is lowered; we are made the butts of the penny-a-liners of the press, which, naturally, has an effect on the minds of the public; our legitimate trade is filched away from us by unscrupulous dealers; we are held up to the public gaze as ignorant and reckless individuals who tamper with the lives and the health of our customers. A newly-invented profession is sprung upon the world, called sanitary engineering, which proposes to its confiding patrons to guard and protect them against their insidious enemy, the plumber. Boards of health, too, lend their aid to these magniloquent braggarts by publicly setting the seal of their disapproval on practical skill and experience, and their unqualified indorsement of book-taught experts and newspaper scientists. It is a fact to-day that the men whose lives are spent in the solution of, and whose pursuits lie close to, the sanitary problems of the day more than any other, are ostentatiously ignored, and the claims of raw graduates from medical or other schools are as brazenly thrust in the face of the public."

The remedy proposed for these evils appears to be to get all the plumbers in the country to join an association, formed on the strictest trade-union principles, the members of which are not to purchase materials from any dealer who sells to any other parties than plumbers, and who, probably, are to refuse to work in accordance with plans made by any sanitary engineer or with suggestions of any one who is not a master-plumber.

The absurdity of the complaint is only equalled by the folly of the remedy proposed.

What are the facts in the case? A very large proportion of the men who advertise themselves as plumbers are incompetent mechanics who have never served any sufficient apprenticeship, and are unfit to be trusted with anything but the simplest kind of work. A very considerable number of the plumbers who are good mechanics have forfeited the confidence of the public, because they have taken contracts at prices for which good work and materials could not be furnished, and have furnished poor materials and done bad work in order to make it pay, thus playing into the hands of the so-called "Jerry builders."

That the tone of the plumbing trade has been lowered there is no doubt, but the plumbers themselves are responsible for it. The remedy is not a trade-union, in which the skilled and honest workman is to stand on the same level as the incompetent and ignorant man who knows little more than how to wipe a joint. The true remedy is a system of registration of competent plumbers, the competency to be determined by adequate tests, and it is to secure this that association on the part of the really skilled men can produce the most valuable results.

As to the claim that plumbers alone shall furnish materials, and that every one is to accept the plumber's dictum as to what fixtures shall be used, and how the pipes shall be arranged, it is so absurd that the mere statement is a sufficient refutation. Equally absurd is the hostility evinced towards sanitary engineers and health boards and officials. These are in fact the best friends and most powerful auxiliaries of the competent and honest mechanic. They are teaching the public the importance and value of good work, and every job of skin-plumbing which they condemn, and every piece of blundering stupidity which they expose, directly tends to raise the tone of the trade. The sanitary engineer or inspector does not compete with the plumber—he makes work for him;—if he competes with any one, it is the architect or builder. How far it is necessary or desirable that the Sanitary Inspector should have a practical knowledge of plumbing is a question—undoubtedly such knowledge would be useful, yet the best sanitary inspectors in this country or in Europe probably could not set a closet or bath-tub and do all the work with their own hands.

The improvements which have been made of late years in systems of house-drainage, to secure proper traps and adequate ventilation, have not received the recognition of their merits which the educated part of the public now gives them through the exertions of plumbers, even if the latter have devised them, which is not the case for all of them by any means.

If a much larger proportion of physicians than is now the case, interested themselves in the subject of house-drainage, it would be the better for the plumbers as well as for their patients, and we believe that most competent mechanics would promptly admit this.

We are glad to learn, however, that some plumbers at all events are sensitive to criticism, for it is an encouragement to continue it, and if they do not wish to be ridiculed they certainly should not accept as grievances the statements set forth by Mr. Remick.

DESQUAMATIVE PNEUMONIA—BUHL'S PNEUMONIA. DOES IT EXIST?

It is well known that more than twenty-five years ago, Buhl suggested this term for an acute pneumonic process, which consists primarily in a swelling, nuclear proliferation, and desquamation of the epithelial lining of the air-vessels—phenomena which really depend upon a serous infiltration of the alveolar walls, the parenchyma of the organ. It occurs in three degrees: the first and least marked being one of the symptoms of severe general processes, bearing the same relation to them as do alterations in the kidneys, heart, muscles, etc., which are usually termed "parenchymatous." Whence the term parenchymatous pneumonia would also be appropriate for it.

The second form, which is inflammatory from the beginning, Buhl terms *genuine desquamative pneumonia*. It bears the same relation to the first form that true parenchymatous nephritis does to collateral affections of the kidney in severe constitutional disease. In this form, to the phenomena of desquamation are added a hyperplasia of the connective-tissue cells of the alveolar walls and a decided pigmentation of the latter. The process is more really a "parenchymatous" inflammation, and, while recovery is not impossible, it generally passes over into cirrhosis or fatty degeneration.

The highest degree is that which terminates in fatty degeneration, and is known as cheesy tuberculous pneumonia. The process usually extends through an entire lobe, and especially an upper lobe, or even an entire lung, in which event it begins in an upper lobe, and extends thence downward. The cheesy tubercular pneumonia, always primary, is the localized expression of a constitutional tendency, without a focus of infection. As such, it is opposed to miliary tuberculosis, which is always secondary, and due to an infectious irritant.

Well described and defined as appeared to be this process, it is evident that, if the most recent doctrines growing out of the discovery of the bacillus tuberculosis prevail, the fundamental idea on which this third form of desquamative pneumonia of Buhl is based is withdrawn. If it is the specific bacillus which causes tuberculosis, then there can be no tuberculous pneumonia, the result of a constitutional tendency, and although it is not impossible that a rapid caseating pneumonia may supervene upon a disseminated miliary tuberculosis, such supervention must be very rare. And in a recent paper (*Deut. med. Wochenschr.*, May 2), Nauwerck attempts to prove by observations at the post-mortem table, and by the microscope, that this *a priori* deduction is correct. His position at the Zürich clinic gave him the opportunity of seeing many cases corresponding in all respects in their clinical histories with those described by Buhl as characteristic of his desquamative pneumonia (lobar tuberculous pneumonia)—that is, the patients had scarcely reached or slightly passed their twentieth year; frequently belonged to tubercular families; had previously shown pulmonary symptoms; the attack commenced like croupous pneumonia, but in an upper lobe of the lung, extending thence to a part or whole of a lower lobe, sometimes partially improving, never terminating in recovery, but after weeks or months of illness in death. Nauwerck's most rapid case died in six weeks. At the autopsies, the affected lobes in the rapid cases were in a state of more or less diffuse caseous infiltration; in the older ones were noted cavities, an overgrowth of cicatricial connective tissue, etc., and most frequently the lobes were in a state of slate-colored induration, uniformly perforated by cavities, producing an appearance which he compared to that of a coarse sponge.

Here, however, the correspondence with Buhl's picture ceased. Microscopic and even closer macroscopic examination in no way sustained the diagnosis of primary cheesy pneumonia. In no instances were there old alterations at the apex, pleural adhesion, or slate-colored induration; while there were always present cavities communicating with the branches of the bronchial tube, and Koch's tubercle-bacilli were found in all sections, whether through cheesy portions, or through parts in which the normal structure was not destroyed by the cheesy infiltrate.

From such facts as these, Nauwerck concludes that all cases corresponding clinically with Buhl's description, and anatomically presenting the above described features, including cavities at the apex, originate not as lobar, but as confluent lobular pneumonias; that they are caused by the aspiration of cheesy purulent matter, loaded with specific bacilli, in which the preëxisting cavity in the apex always abounds. These are drawn from the cavity into the communicating bronchus, and thence into the smaller bronchioles leading to the infundibula, in which they light up tubercular processes.

INFANT MORTALITY.

As the season has arrived when a greatly increased death-rate amongst infants is to be expected, no effort should be spared in the prompt use of measures known to be effective in counteracting or lessening the preventable causes of sickness amongst the young. The appalling waste of human life in the summer months from causes plainly within control, suggests a broad and fruitful field for the noble work of the sanitarian and philanthropist. A marked increase in mortality from influences associated with the season, is inevitable, notwithstanding the best hygienic surroundings; but a large proportion of the excess of deaths, especially among those of tender years, can be clearly traced to a violation of the precepts of sanitary law.

Ignorance, poverty, and crime, are the conditions mostly at fault in the class of society from which the excessive mortality is derived, and it is to the improvement and amelioration of these conditions that special and persistent effort must be directed, if tangible results are to be expected.

Upon the municipality there rests a heavy responsibility. The removal of all injurious influences strictly within public control is a bounden duty. Thorough cleanliness of the streets and surroundings of habitations, particularly in densely populated districts, prompt removal of all refuse matter, an adequate supply of pure water, the rigid inspection of food supplies, and the judicious inspection of habitations with the object of improving the homes of the poor: are all matters that require the most constant attention at this season of the year.

The instruction of the ignorant with regard to the management of infants during the heated term is a subject which has of late attracted especial attention. Tracts containing plain instructions to mothers have been and should be each year freely circulated in most of the large cities, and the importance of this practice cannot be too highly estimated in view of the extreme ignorance on the subject existing among the masses.

Public effort though indispensable is necessarily restricted, and must be largely supplemented by the labors of the benevolent and philanthropic. Noble efforts are being made by individuals and charitable organizations to improve the conditions of the poor by instruction, advice, and substantial assistance in cases of absolute need, and in warding off sickness, and in relieving the sick and suffering amongst the destitute. The procurement of temporary homes in the country for the children of the poor, under the direction of the Children's Country Week Association, has been the means of saving many a life which would otherwise have been sacrificed in the season of torrid heat.

The Sanitarium Association, which daily provides, free of cost, the advantages of fresh, pure air and wholesome food, upon an island in the Delaware, for thousands of children gathered from the foul courts and alleys of the city, is another means of overcoming the deadly influences which are always operating on infant life in crowded districts in the summer season. Akin to these institutions are the Sanitarium at Baltimore, *The Tribune* fresh-air fund, and the St. John's Guild in New York City, their object being to afford poor children an opportunity for obtaining fresh and pure air during the warm months. The Children's Seashore House, at Atlantic City, for Invalid Children, should also be mentioned as one of the successful means of combating the injurious influences of summer life in the city, though the scope of its usefulness is necessarily limited.

Such institutions may be taken as illustrations of the agencies which are most serviceable in contributing to the comfort and enjoyment of the children of the poor, and in warding off sickness, restoring health, and preventing the needless sacrifice of human life. As such, they commend themselves to the hearty sympathy and liberal support of the charitable.

CAUSES OF ALBUMINURIA.

Pentzold has recently reported to the Congress of German Physicians the results of a most important series of experiments upon animals, made with a view to determine the effect of different substances used as foods and medicines in producing albuminuria.

The first agent experimented with was alcohol, on account of the importance which has always been attached to it in relation to renal diseases. Twenty-five to thirty cc. (about f℥j) were administered (daily?) to a dog, and in the course of three months, albuminuria and decided fatty degeneration of the renal epithelium supervened. The ingestion of amylic alcohol also, the usual alcoholic impurity in whiskey, was followed by death from acute nephritis in seven weeks; as was also the ingestion of 200 cc. at one dose.

In like manner the presence of ergot in moderate quantity in the bread consumed by dogs produced albuminuria and fatty degeneration. So also mustard ingested for six months produced temporary albuminuria and fatty degeneration of the uriniferous tubules. Pepper acted similarly, and radishes were followed each time by an albuminuria lasting a few days. Even tea produced in one case decided albuminuria, and in certain small dogs the administration of twenty grammes a day was followed by a sediment composed of white blood-corpuscles, fatty epithelium, and granular tube-casts.

In consequence of the frequency of albuminuria in cases of diabetes, Pentzold fed dogs with ordinary grape-sugar and very soon produced albuminuria, the dogs dying in one month after having taken 1400 grammes; and after death there was found decided fatty degeneration of the cells lining the convoluted and straight tubes, while there was no sugar in the urine.

While it was impossible to estimate from these experiments the effects of the same substances on human beings, Pentzold very properly characterizes them as pointers whence we may regulate the use of certain food elements by albuminuric patients.

As to drugs, there is an unfortunate discrepancy in the report (*Deut. med. Woch.*, May 16), and we look anxiously for a revised and corrected statement. Thus Pentzold found that tannin, whether in large or small doses, was without effect; sodium acetate diminished the secretion of albumen considerably; potassium acetate, pilocarpine, and digitalis, on the other hand, in large doses, increased it—pilocarpine fourfold, and digitalis twofold. In the next paragraph, however, Pentzold in speaking of the therapeutic deductions which may be made from the latter series of experiments, says tannin, digitalis, and pilocarpine produced no alteration in the secretion of albumen; on the other hand, sodium and potassium acetate in moderate doses appeared to exert a favorable influence. Notwithstanding these descrepancies we think it important to lay these facts before our readers without delay.

Pentzold advised, in conclusion, that experiments should be made with digitalis, conducted in such a way that the blood-pressure be kept under accurate observation, with a view to determine whether increasing or lowering the blood-pressure influenced in any way, the filtration of albumen through the kidneys.

SOCIETY PROCEEDINGS.

A GOOD deal of our space has, of late, been naturally devoted to the annual sessions of State and other medical societies. Their proceedings may be fairly considered as the mirrors, reflecting the operation and position of the profession to date, and as such they are worthy of attentive perusal.

Any one who has even cursorily examined these proceedings as they have appeared in our pages during the past three months cannot fail to have noted that there are great differences in the quality as well as the quantity of the material which makes them up. At the same time we think it well that good, bad, and indifferent should all be published. The opportunity of comparison is afforded, and the societies which are deficient, noting their deficiences, can labor to correct them, and those whose work is creditable, be stimulated to make it more so.

It must be admitted, however, that the proceedings of our societies, even at their best, compare but ill with those of foreign countries, — at least with those of Germany, of England, and of France. Any one who may have read the proceedings of the Society of German Physicians at its recent session at Wiesbaden, or of the 12th Congress of German surgeons at Berlin, or of the Academy of Medicine of Paris, cannot fail to have been struck with the originality and practical value of the papers read before them, and the large amount of information brought out by the discussions. This is because these discussions are participated in by the leaders in the profession, while with us the best men, as a rule, keep aloof from the meetings. We have already presented to our readers the essential portions of some of these.

The first question which naturally suggests itself is, Why this superiority? Doubtless more than one element contributes to it. In the first place, the more thorough training and broader general and professional culture of the foreign physician qualify a larger number to become contributors, through experiment and observation, to our knowledge. Again, of those at home qualified to observe and pursue original investigations, many are so tramelled by the multiplicity of duties which naturally devolve upon them in the methods of practising and teaching still necessary in this country, that comparatively few are left who have the time to investigate. Finally, we regret to have to say that the organization of our Societies is generally such as to discourage the interest and attendance of those who might, by reading papers and joining in discussions, furnish much valuable information. Too often office is given to those who are least qualified, and who would never be thought of for these positions if they themselves had not sought them, or if some absurd notion of the geographical distribution of office had not influenced their appointment.

We feel, however, that a better day is dawning upon us, and its results are seen in the proceedings of the Societies organized for the development of the specialties, where no such elements as those last referred to are apparently allowed to operate, and where good work is being done; as witness the Proceedings of the Laryngological and Neurological

Societies, which have recently concluded their sessions in New York.

So, too, as the general and technical culture of our medical men becomes broader, and their leisure for special work greater, we may expect to see these influences operate in securing us a better class of communications, and more original investigation.

REVIEWS.

Students' Guide to Diseases of the Eye. By Edward Nettleship, F.R.C.S., Ophthalmic Surgeon to St. Thomas' Hospital and to the Hospital for Sick Children. Second American, from the second revised and enlarged English edition. With a Chapter on Examination of Color-Perception, by William Thomson, M.D., Professor of Ophthalmology in Jefferson Medical College.

The early demand for a second edition of this excellent little manual shows that it has met with the appreciation and success that it deserves. It has been somewhat enlarged, a number of new woodcuts have been added, and some changes have been made by the author in his arrangement of the contents. The chapter by Dr. Thomson on the examination of railway employés gives interesting and instructive information upon a subject that has recently attracted much attention, not only in the medical profession, but in the general public as well.

The student or physician who seeks to obtain a practical knowledge of the affections of the eye without too much sacrifice of time, imperatively demanded in many directions, will nowhere find a more satisfactory *multum in parvo* than is offered here.

SOCIETY PROCEEDINGS.

PHILADELPHIA ACADEMY OF SURGERY.

Stated Meeting, April 4, 1883.

The President, S. D. Gross, M.D., LL.D., D.C.L., in the Chair.

Dr. J. M. Barton read a paper entitled

SEPARATION OF THE EPIPHYSIS OF THE HEAD OF THE FEMUR.

This accident is so rare that it is scarcely mentioned in any of the great systems of surgery.

Hamilton, in his edition of 1875 of his work on *Fractures and Dislocations*, reports four cases, and states that "these four constitute the only examples of this accident which I find reported, or of which I have any knowledge, and although there may be much reason to suppose that the diagnosis was correct in each instance, I cannot regard any one of them as actually proven." In his last edition he has added two very briefly reported cases to his list. Under these circumstances I regard the history of this case, and the manner in which the injuries were received, as worthy of being placed upon record.

In May, 1881, I saw, with Dr. Minich, of this city, John L., aged 15 years, who a few days before, while working in his father's mill, had received some injury to his hip. While crossing the yard, carrying a large bundle, a companion, in play, pushed against him, the bundle came to the ground, and he saved himself from falling by resting his hands on it. While in this position, leaning forward with his hands resting on the bundle, a second push turned him over, and he came to the ground seated, supporting his weight by his hands. His hip came but lightly in contact with the ground, if at all.

On examination we found one inch of shortening; the foot was everted, though somewhat stiffly, the outer edge of the foot not lying on the bed, as in senile intracapsular fracture, but making an angle of about twenty degrees (20°) with the surface of the bed. The knee and small of the back were in contact with the bed at the same time. The fascia lata was relaxed. The trochanter was higher, more prominent, and nearer the anterior superior spinous process than its fellow of the opposite side. There was no spasm of the muscles about the hip. The buttock was flattened, and the gluteo-femoral crease was not well marked.

Under ether the limb was as readily and fully rotated as its fellow, the trochanter describing a large arc of a small circle, or, in other words, rotating on its own centre, and not increasing its distance from the median line of the body. On extending the limb it readily acquired its full length, and all deformity disappeared, both shortening and prominence of trochanter immediately reappearing on relaxing the extension.

During these manipulations crepitation of an unusual kind was felt, as though large surfaces of denuded bone were being rubbed on each other. Placing the patient on his side, the knee of the injured leg can be made to go three inches further posteriorly than its fellow. The wasting of the buttock suggested further inquiry, and it was found that the boy had slightly limped for some weeks, and had had pain in the inner side of the knee. Yet notwithstanding these evidences of beginning coxalgia, he had been able to work and take an active part in play with his companions. Within a week prior to the accident he had engaged actively in a game of foot-ball, using the now injured limb to kick the ball, and felt no inconvenience from so doing.

The case was readily determined to be none of the usual dislocations, but the presence of the inflammatory action suggested the possibility of, 1st, a rupture of the "Y" ligament, and a dislocation without characteristic deformity. 2d. An unusual dislocation. 3d. The absorption of the head of femur and of acetabulum and resulting dislocation on slight violence. 4th. fracture of the neck or rather separation of the epiphysis in a congested and perhaps inflamed bone.

The usual and unusual dislocations were readily excluded. 1st. By the absence of the characteristic deformity and the inability to find the head of the femur in any unusual situation. 2d. By the ease which under ether, full extension was made, obliterating all deformity, and the immediate reproduction of all symptoms on relaxing the extension. 3d. That during full rotation of the limb, carrying the toes from full inversion to full eversion the trochanter rotated on its centre and its distance from the median line of the body was not increased. The dislocation occurring in advanced coxalgia was excluded. 1st. By the patient's ability to freely and violently use the limb immediately prior to his injury. 2d. The fact that the deformity was immediately reproduced on relaxing the extension; in cases of dislocation in advanced hip-disease, the head of the femur catches in and perhaps remains for a short time in the enlarged acetabulum during examination. 3d. The same test as was used to exclude the other dislocations, viz., the distance of the trochanter from the median line not being increased on full rotation.

The diagnosis of separation of the head of the femur was made, the patient was placed in bed with extension, sand-bags, and additional support at the region of the injury. He was kept in this position in bed five weeks, during which time there was less than half an inch of shortening. On carefully removing the extension at the expiration of this period, the original deformity immediately returned.

The boy wore, for a few weeks, a hip-joint apparatus with shoe attached, and perineal bands upon which the weight of the body could rest when the patient was walking, to permit the gluteal muscles to accommodate themselves to the pressure of the trochanter. One year later the shortening had increased to one and one-half inches; he moves the limb freely and strongly and has an unusual amount of power in rotating it; with the exception of a slight limp, he has entire control of the limb.

I have spoken of the increased distance of the trochanter from the median line in certain dislocations. I am not aware of this test having been published, but I have carefully examined it on the skeleton, and verified it often on the cadaver and on patients.

In making the examination, I place the patient on the floor or other unyielding surface; if the limb be dislocated, it will either not rotate freely, and this is the case in the usual dislocations where the integrity of the "Y" ligament is preserved; if it rotates freely, either the trochanter describes an enormous arc which is quite conspicuous, or the trochanter materially increases its distance from the median line; this applies only to dislocations in which shortening is one of the symptoms. The amount of increased distance of the trochanter from the median line is best determined by placing a large book against each trochanter, rotating both legs and measuring the distance of the book from the median line of the body. I would like to call attention to a ready method of accurately measuring shortening in injuries of the hip.

The method I have been in the habit of using is to first accurately mark both anterior superior spinous processes with an aniline pencil. It is sometimes difficult, where the ilium is much curved, to exactly determine the position of "the process;" under such circumstances, I mark the curve of the ilium for a couple of inches, then, as a radius to the curve, I draw a line at the process; if an error in the marking be made, it will be very conspicuous.

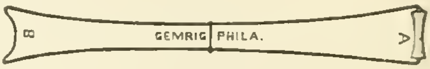
Now, having the anterior superior spine accurately marked, with the patient lying on his back on a flat, unyielding surface, with both feet at right angles to the legs, pass an inelastic cord around the hollow of the foot, and bring both ends to the corresponding spinous process. I feel satisfied that a very slight difference in length of the limbs can be readily detected by this means.

Dr. William Hunt alluded to the diminished value of accurate measurements in the treatment of fractures of the lower extremity, especially of the thigh, since the fact of asymmetry in the same person—irrespective of injury—had been found to exist in most cases. Where the shortening is due to overlapping, it is mostly appreciable by examination at the seat of fracture, and is of course to be corrected; but where the amount of it is fractional, and not apparent to the eye, and is only made evident by careful measurements, it may be fairly assumed that the patient was unsymmetrical before he met with the accident. Dr. Hunt spoke of a letter he had received from Sir James Paget, in which that distinguished authority acknowledges his dissatisfaction with the results of measuring, and rather relies upon his eye than upon the tape.

Dr. J. Ewing Mears remarked that he did not think epiphyseal separation of the head of the femur so rare an occurrence as stated by the author of the paper. The junction of the epiphyses to the shaft of the bone does not begin until after puberty, and is not completed until the twentieth year. It would therefore seem quite possible for separation to occur as the result of injuries to children, and, being unrecognized, would not be recorded. He was inclined to believe that in some instances of inflammation of the hip-joint, consequent upon injury, epiphyseal separation, more or less complete, had occurred.

SPLINT FOR SYNOVITIS OF WRIST-JOINT.

Dr. J. M. Barton exhibited to the Society a splint which he had been in the habit of using for some years in cases of synovitis of the wrist-joint; it is a light and convenient method of applying extension, permitting nearly entire concealment of the splint and some use of the fingers.



The splint is made of wire, is about eleven inches long and from one and one-half to two inches wide; it is placed on the palmar aspect of the hand and forearm, reaching from below the bend of the elbow to the metacarpo-phalangeal joints.

The upper extremity (B) is slightly indented to receive the adhesive plaster used in the counter-extension. On the lower extremity (A) the extending band plays. The extension is maintained by a piece of heavy nipper elastic, which is fastened to the upper cross wire at (B), and to the extending band after it passes over the roller at (A).

The extension is made by sewing a heavy kid-glove on the hand, cutting off all the fingers of the glove except that of the middle and ring fingers; these two are split down the back and retain their attachment only to the palm of the glove; they are passed over the roller and attached to the rubber extending-band, the upper end of which is attached to the upper cross-bar of the splint at (B). The counter-extension is made by two strips of adhesive plaster, each two inches wide and thirteen inches long, reaching from the wrist-joint over the upper extremity (B) of the splint and down again to the wrist; a light bandage from the wrist up keeps the adhesive plaster in place; the extending band, viz., the glove fingers, are attached to the rubber band by a piece of cord; the extending force is determined by the amount of tension of the rubber band, about one pound of pull being quite sufficient.

Dr. Barton presented also a patient with a splint on, that she had worn for the last five weeks; she had suffered from synovitis of the wrist for six months; she had been leeched, blistered, painted with iodine, worn a plaster dressing, etc., without effect; now, however, she is entirely relieved, the wrist is freely movable without any pain or tenderness, showing that this splint maintains an effective extension while worn. He does not claim any new principle, but only a more convenient apparatus than the usual one, where the elastic extension is maintained on a splint reaching several inches below the fingers.

SUPRA-HEPATIC ABSCESS WITH OBSCURE SYMPTOMS DURING LIFE.

Dr. Packard gave a verbal account of the following case:

Mr. F., æt. 36, was seized March 14, 1883, at about noon, with sharp pain in the right side of the abdomen as he was descending a staircase. The pain soon abated, and he walked home, about half a mile; but on the way had so violent a recurrence of the pain that he could scarcely walk. At about 1 P.M., when I saw him, he was lying on his bed in great agony, unable to move at all.

By the use of a large enema of Castile soap and hot water, an opium suppository, and the internal administration of chlorodyne in small doses frequently repeated, relief was given for some hours; but in the evening he had another severe attack. I now learned that Dr. George A. Rex had been consulted by him on account of dyspeptic symptoms several times during the winter, and at my request he took charge of the case along with me.

On the 15th, although he was in less pain, the symptoms of obstruction were unchanged, and the possibility that laparotomy might eventually be indicated was considered. Dr. Ashhurst, at my request, was also brought into the consultation, and agreed with us that an operation would be called for if other means failed to give relief. Leeches were applied over the seat of tenderness, and mercurial ointment; the anodynes were continued.

The leeching seemed to do him much good, and another enema brought away some fecal matter from the colon. After this the acute symptoms subsided, and after several days the bowels were moved without enemata. Yet he did not rally; his evening temperature continued to be above 102°, and his morning temperature over 100°; and his condition resembled enteric or typhoid fever. I attended with Dr. Rex until March 22d, when I ceased my visits until they should send for me.

March 31.—I was summoned in great haste in the morning, and found Mr. F. coughing up large quantities of excessively fetid pus, tinged with blood. He seemed very much prostrated, partly perhaps by the sickening effect of the odor of the expectorated matter. From this collapse, although stimulants and carbonate of ammonia were freely given, he never rallied, and death ensued in about three hours.

Autopsy, April 1, at 2 P.M. Body in ice; not much emaciation; no rigor mortis. An immense abscess, with walls lined with croupous lymph, was found occupying the space between the diaphragm above, the right lobe of the liver below, the suspensory ligament at the inner side, and the abdominal wall at the outer side. This had communicated with the right pleural cavity by an opening through the diaphragm at its posterior part. A good deal of sero-purulent liquid was contained in the pleural sac. Evidently there had been effusion from this serous membrane in addition to the pus.

The quantity of the liquid could only be approximately estimated, but seemed to be over a quart. The orifice by which the effused matters gained access to the air-passages could not be detected without a longer and more careful exploration than could be instituted.

On the first opening of the chest, the right lung was compressed, especially in its lower lobe; but the air subsequently entered this portion of the organ, and it resumed its normal appearance.

Between the duodenum at its very commencement and the parietal peritoneum of the right side, there was a close and firm adhesion, pulling the stomach out into an almost tubular shape; but beyond this there was no sign of any peritonitis other than that in the region of the abscess. All the other organs except those mentioned seemed normal.

STRANGULATED VENTRAL HERNIA, REQUIRING OPERATION.

Dr. Packard reported the following case:

Mrs. James, colored, æt. 57, had had a hernia a little above and to the right of the umbilicus since a severe confinement about twenty years since. It had often given her some trouble, but she had always succeeded in returning it herself, except on one occasion, some months ago, when it was out for three hours, and was then reduced by taxis by Dr. R. A. Cleemann.

Dr. Wirgman and myself were called to her at 4 P.M., March 21, 1883. The hernia had been out about four hours. She had no pain, no vomiting; but could not replace the mass. We tried the taxis, at first without and then with anæsthesia, but to no purpose. She was ordered a large enema of castile soap and water, and then an opium suppository; and ice to the tumor.

At 8 P.M., we saw her again, and found the tumor increased in size, still painless, though somewhat sore. A thorough attempt at taxis failing to produce any impression, the patient being etherized, it was decided to operate, which I accordingly did, with the aid of Drs. Wirgman and Horwitz, and Mr. Shober and my son, medical students.

I made a curved incision, embracing about one-quarter of the circumference of the tumor, at its upper and right aspect, and came of course at once upon the sac, after dividing the skin and fat. Reduction being still impossible, I opened the sac, and found a large mass of omental fat, beneath which was a double knuckle of bowel, quite purple, distended, and velvety in surface. I could not replace it until I had nicked the firm edge of the stricturing ring with a Cooper's knife, and not very easily even then, but as the stricture was relieved the bowel resumed its normal color. It was carefully washed with hot carbolized water, and after thoroughly replacing it, with all of the omentum that could be returned, I passed a silver-wire suture through the edges of the ring, and brought them together as closely as possible, twisting the wire six times from left to right, and allowing the long ends to hang out of the wound (traversing the sac, of course). The wound was then closed with four harelip pins, and a number of points of the interrupted suture. A carbolized water-dressing was then applied, and a bandage around the belly. Another opium suppository was given. The patient took the ether well, and at the close of the operation was in good condition.

March 22.—She has had during the night one or two sharp but transient attacks of pain.

23d.—Doing fairly well, although she has had at times some slight delirium; pains less severe; no marked tympany. One dozen leeches applied to belly, and afterwards a large wad of raw cotton. Tr. Aconit. Rad. with neutral mixture.

24th.—Harelip pins removed. Wound seemed to have adhered. Temperature 102°, otherwise better.

25th.—Bowels moved naturally.

27th.—Wound gaping, but not widely. A good deal of sloughing fat and areolar tissue coming away. Pulse and skin good; tongue slightly furred; some little pain in the night.

From this time on there was very little change, except for the better. The sloughs separated and came away, and the wound assumed a healthy granulating aspect, but still tended to gape so widely that

April 2.—I passed a large pin across through both lips of the wound, taking a very deep hold on each side, and applied a ligature around the ends, as in an ordinary harelip suture. This brought the edges quite closely together throughout, and she is in every other respects doing well.

The result of this case will be hereafter reported.

Dr. Wm. Hunt said that he was inclined to doubt the statement made in the books, that a purely omental hernia could give rise to as severe symptoms when strangulated as when the gut was involved. His disbelief arose from the fact that in the treatment of wounds where omentum projected, and also in some cases of hernia operation, we could safely treat the omentum most unceremoniously by purposely strangulating it with ligatures. He asked for an explanation of these facts.

His own idea was that in most cases there was a small portion of intestine involved, as even a portion of the wall of a gut might be pinched, and give rise to symptoms of strangulation.

The great mass of the kind of hernia under consideration being omental, a small portion of gut might not be recognized before reduction. In his own experience, he could not call to mind a case of purely omental hernia upon which he had operated. He once made a post-mortem examination upon the body of a young man who had died with the symptoms of peritonitis and strangulation, but in whom no tumor could be discovered. A portion only of the wall of the bowel was pinched and strangulated in the canal.

Dr. Hunt said he had seen cases of enormous collections of gas in the bowels in hernial sacs, but that these were generally of the reducible form. One case he remembered, where this was not so; the patient was an old and feeble man. The bowels were punctured in several places to let out the gas, but the patient died before they could be replaced.

Dr. Mears said in reply to a question by the Chair, that he had in one instance facilitated the reduction of a femoral hernia by the use of the hypodermic needle as an aspirator, withdrawing from the intestine gas and fluid.

Dr. J. M. Barton inquired of the Fellows if hemorrhage during the division of the stricture in the operation for strangulated hernia was not a bugbear and quite unusual, and what experience the Fellows had with hemorrhage under such circumstances, and what methods they had used to check it.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

Stated Meeting, June 6, 1883.

The President, Alfred Stillé, M.D., in the Chair.

Dr. S. Weir Mitchell read a paper on

THE RELATIONS OF PAIN TO WEATHER, STUDIED DURING ELEVEN YEARS OF A CASE OF TRAUMATIC NEURALGIA; BY CAPTAIN R. CATLIN, U. S. ARMY, WITH NOTES BY HIMSELF.

In *The American Journal of the Medical Sciences*, April, 1877, he said, I described the case of Captain Catlin, U. S. Army, and gave the results of his observations on the relation of states of the weather to his own pain. These studies, suggested by me and carried out with care, at length became of equal interest to the observer, and, with occasional advice, he has continued to keep notes, until the the record, with his comments, constitutes, in my opinion, a most valuable contribution to the strict science of medicine.

For full details of his case, I must refer to my essay, but it is needful here to make a brief statement explanatory, so that what he now says may be comprehensible without reference to the former record.

In August, 1864, Captain Catlin, then in perfect health, had his food crushed in battle by a round shot. There was no shock; the leg was amputated below the knee, and he was up and about in a month. Pain was felt early in the lost foot, and became severe within nine months.

I should perhaps state that, except as concerns pain, the observer is in admirable health, that his attacks are so definite as to coming and going, as to create little difficulty in this direction, and that from his former position as instructor in certain scientific branches at West Point, he is well qualified by training to pursue this difficult study. The weather reports of the Signal Office and his own, or the daily observations of others, have enabled him, from time to time, to relate these to his record of neuralgia, and by this method he has avoided the constant presence of daily thought as to what was about to happen in consequence of atmospheric changes. I may add that I never knew any man more free from unwholesome attention to his own ailments. Most of what I learned from our former study, still stands unaltered by this much longer record; but there have been some fresh and suggestive gains in the relation of pain to meals, to daily barometric changes, and to magnetic conditions.

The following is the report of the case for the past seven years, made by Captain Catlin:

For the year 1872 there were 1783 hours of pain (the records for 1873 and 1874 are incomplete); for 1875 there were 1892 hours; for 1876, 1790 hours; for 1877, 1794 hours; for 1878, 1591 hours; for 1879, 1535 hours; for 1880, 1567 hours; for 1881, 1405 hours; and for 1882, 1370 hours. From 1872 the annual amount of pain increased and probably reached its maximum in 1874, a year of high pressure, which, as we proceed, will be found to have some relation to the pain.

For 1875, we have the highest recorded amount of pain. The next year, 1876, the amount of pain fell off 100 hours, with a decrease of the mean annual pressure, equal to 00.021 of an inch, with corresponding increase of temperature. For the following year, 1877, the pain and pressure remained nearly constant and parallel, with some increase in temperature. For the year 1878, there was a remarkable lessening of 200 hours in the neuralgic amount, but by following up the barometric curve an equally remarkable fall is found. The annual mean of the barometer for the year (1878) was 00.068 of an inch below the mean of the previous year, and 00.067 of an inch below the mean for the eight years, the mean for the eight years being 29.916. From the low annual pressure of this year, we may almost infer a high annual temperature, which we do indeed find in the curve, and the Signal Bureau reported for the Middle Atlantic the temperature "above the average" for every month in the year except June. For the year the *number* of pain attacks and the *number* of storms remained about normal, but the *duration* of the pain attacks was shortened.

This law of relationship of low pressure and high temperature to amount of pain, and the number of attacks of pain, and number of storms will become more apparent when we come to the consideration of the quarterly and monthly distribution of pain and storm. Since 1878 the pain has diminished at the rate of forty hours annually; diminution being accelerated by a decrease of mean annual pressure and retarded (or actually held in suspension as in 1880) by an increasing pressure. Making allowance for the annual decrease of pain, there is a remarkable parallelism between the pain and pressure-curve. The yearly temperature bears the same relation to the barometer, as it was found to have in the monthly fluctuations. The total amount of pain for the eight years, ending January 1, 1883, was 12,944 hours, or nearly one-fifth of the time. The distribution of the pain was shown by a curve of the total monthly amounts for the eight years, from which it was readily seen that the winter months hold the advantage as pain-producers, and that for this period while the sun was north of the equator, there were 6,783 hours, against 6,161 hours, while it was south of the equator.

Of the quarterly amounts, the first quarter, beginning with the winter solstice, leads with 3,538 hours, followed by the fourth quarter at 3,245 hours; then the second, with 3,098, and the least in the third quarter (July, August, and September) with 3,063 hours.

Of the monthly amounts, March holds the lead, closely pressed by January, and in order of amounts follow: November, December, May, February, April, August, October, September, July, and June. The number of storms recorded for the eight years is 806, taken from the Signal Bureau Records.

Of this number 529 belong to the winters, against 397 for the summers.

The quarterly numbers, in like manner, correspond to quarterly amounts of neuralgia, and by a reference to the storm-curve there is shown a remarkable parallelism throughout with the pain-curve.

The average *duration* of each attack of pain for the whole time was 18.97 hours; but again we find average *duration* bearing a relation to amount of pain and number of storms.

The average for first quarter being 20.1 hours, for second quarter being 18.4 hours, for third quarter 17.9 hours, and for the fourth quarter 19.4 hours, which we see is directly proportional to storm and amount of pain. The average duration of pain was found to be greatest in February, 20.8 hours, one of the coldest, if not the coldest month, and containing probably the greatest barometric fluctuations of any month in the year.

Although the average velocity of translation of the winter storms be greater than the summer ones, owing to their much greater range and power, they are further reaching, and in consequence produce longer attacks. The hottest month of the year (July) gave the least average duration of pain, being seventeen hours.

This is a month of low average pressure and unimportant and minimum barometric fluctuations. By an examination of the curve of the mean monthly *number* of attacks, there is found an almost exact *monthly* parallelism with the pain and storm-curve, but the mean *quarterly* of the curve would not be as nearly parallel with the mean quarterly of the pain or storm, which shows that the number of attacks of pain is greater in proportion to the number of storms for summer than for winter. Many of the summer storms are difficult to trace, and some are not charted owing to their indefiniteness, but they are nevertheless pain-producers. For this reason it is believed that the relationship of the number of pain attacks to the number of storms is not as disproportionate as appears in the quarterly comparison of the curves.

Passing to the rain-curve, we find it in harmony with the pain and storm-curves, except for a few of the summer months. For these months, owing to the short and heavy precipitation of rain, and local character of many of the storms, the curve does not subordinate itself to the pain, storm, or even barometric curve.

Thus we see that rain-fall of itself is only relatively to be used as a measure for pain.

The barometric curve, as it swings almost a catenary from January to December, measures, with the storm-curve, much more accurately the ordinates of the pain-curve; and here we have reappearing in the quarterly monthly products of neuralgia the law already disclosed in the annual product of pain—viz., high temperature, low barometer, favorable for non-product of pain; and, in addition, minimum barometric undulations, favoring diminution of pain duration.

To determine the average distance of the storm-centre at the beginning of the pain attacks, sixty well-defined storms through ten consecutive months were taken, and it was thus found that the average distance was 680 miles, ranging from 200 to 1200 miles.

Storms from the Pacific are felt the farthest off, very soon after crossing the Rocky Mountains. Those which move along the coast from the Gulf of Mexico are associated with neuralgia not quite so intense, and are not felt, as a rule, until within the average neuralgia distance.

If neuralgia begins on a low and rising barometer, the ridge of high pressure between this and the coming storm-depression is narrow, and invariably broken down within seventy-two hours, and more frequently within twenty-four or thirty-six hours; and during this rise, coincident with the pain, the difference between the wet and dry bulb thermometer, instead of increasing, as is usual with this barometrical condition, sometimes actually diminishes, or increases for a few hours only, and then diminishes, showing increasing humidity.

When this pain and instrumental condition obtains, the coming storm depression will carry on its eastward side clouds and increasing moisture, and sometimes rain or snow, clear over the summit of the advancing high area pressure in front of it, holding an unusually high degree of relative humidity in the air on the high eastern slope of the high barometer area. These are the conditions when the pain attacks on the rising barometer. Its normal condition, however, is with a falling but it may be a high barometer, rising temperature, and increasing relative humidity.[1]

Should the pain be on during a day of intermitting rain, the pain takes an additional activity just before the increasing shower, and continues twenty to forty minutes; this will sometimes happen four or five times in twelve hours. Each little increment of pain seems to bear about the same relation to the showers, as the main attack bears to the storm.

It has always been observed that eating a meal when the pain is on intensifies it, and it is believed that it often hastens the attack. We should then expect to find some rise in the curve after each meal. This we do find at 9 A.M., which cannot be accounted for otherwise than that by eating at 8 A.M.. some of the neuralgia, which really belongs to 10 o'clock, has been prematurely developed, and so changed to 9 o'clock. Again, after the 1 o'clock meal, there is a decided rise in the number, *some* of which, at least, should be chargeable to the meal. It is also worthy of note that there is an ebb-tide in pain, just preceding the meals; not so marked before breakfast, partly, no doubt, because it is with me a little less regular than other meals, and partly because storms coming within neuralgia range during the early and middle sleeping hours, would not ordinarily arouse their victim, but would strike in the morning, as the sleep became less profound.

This, doubtless, is the cause of the rapid rise in the curve between 5 and 6 A.M.

In support of this statement of the respect which a storm may have for its neuralgic subject, it may be added, that if the pain is on when the patient falls asleep, and he is aroused or awakens during the night, he will find himself free from pain; but if he should move about, or stay awake fifteen or twenty minutes, the pain is renewed, unless in the mean time the neuralgia time has expired.[2] At 11 P.M., the average number of attacks is not one a year, and from this time until 6 A.M., there is great immunity from *onsets* of pain.

With regard to the prominent and remarkable feature of the curve on the 11 A.M. ordinate, it cannot be positively stated why the pain has shown this great partiality; but there are some reasons which may be of interest to state. We have found that the years of high mean annual pressure gave high pain readings. We have also found that neuralgia in its relation to storms was not averse to a high barometer, but usually attacked on a falling barometer with rising temperature or increasing humidity.

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[1] See same case in American Journal of Medical Sciences for April, 1877, p. 21.

[[2] This is true in regard to most pain, and may be within the experience of many men; we fall asleep suffering, but awake without pain, even if the cause of pain remains. A brief period of being awake seems to be needed, in order that the cause may become active. Sleep is a true anæsthetic.—S. W. M.]

The pain in its relation to the diurnal change of the barometer occupies a position analogous to what we found it in its relationship to barometric movements accompanying storms—that is, high barometer, and on its fall preceding the storm, with increasing humidity and temperature. For the eight hours from 9 A.M. till 4 P.M., during the daily fall of pressure, there are 610 onsets against 346 for the remainder of the day, or sixteen hours. The maximum amount of vapor in the air from 2 until 6 P.M., increasing from before sunrise till just before sunset. We have then for the greatest daily neuralgic period a corresponding falling barometer, increasing vapor and temperature, with the analogous condition complete.

In regard to the 11 A.M. period, there are some other points of interest.

By a reference to the diurnal changes in the magnetic curves, we find: in the declination curve two maxima and two minima daily. The principal maximum occurs at 8 A.M., and the principal minimum at 2 P.M. From this minimum in its progressive movement there is a slight undulation in the curve about 10 P.M., giving rise to a subordinate maximum with another minimum following two hours later near the mean of the curve; from this we reach the principal maximum at 8 A.M.

In the inclination curve we have also two maxima and two minima. The leading and principal feature of this curve is its morning maximum which occurs between 10 and 12 M., probably 10.45 or 11 A.M. A subordinate maximum about 10 or 11 P.M. There is a minimum between 5 and 6 A.M., and another about 5 P. M.

Each of these maxima has a corresponding minimum in the horizontal force. So also the minima in inclination correspond in like manner to maxima in horizontal force. Owing to the great and precipitate change in declination between 8 A.M. and 2 P.M. with the pronounced occurrences in inclination and horizontal force at or close to 11 A.M., may we not with some reason suspect these as active agencies in constructing the 11 A.M. neuralgic period?

The two o'clock period is one connected with the highest temperature and the maximum wind force of the day. It is believed that hours of maximum and minimum rain-fall have some influence on this curve. The British Government[1] has published some observations which, although not conclusive, seem to show that there are two daily maximum rain-falls, one at 7 P.M. and one at 5 A.M.; also two minimum periods, near noon and midnight. It is believed, further, from sensible impressions and limited observations, that solar and earth's radiation have an influence on the daily character of the neuralgia, and, if fully studied, would assist in interpreting some features of the curve not fully understood. With complete record of *local* meteorology, including radiation, there seems but little doubt that all the details of the diurnal curve could be demonstrated. There is one additional fact in connection with the onsets of pain which seems curious, and that is the period of drowsiness and sleepiness which precedes the attacks from one to five hours. This rule is not invariable, but is general.

For the seven years from November 7, 1875, to November 17, 1882, there have been nine neuralgic attacks of great and unusual power. These were characterized by pain in nerves not usually attacked. The ordinary neuralgia in the foot is of the burning and boring kind, with twitchings of nerves in the stump, while in the extraordinary attacks, in addition to the pains as above named, we have the intense stabbing variety, with a much higher degree of the convulsive tendency. Accompanying each of these attacks, except the last, we have the pain period dominated by more than one storm in six out of the nine attacks, and in *every* case the low barometric depression was of unusual and enormous extent. The attack of November 7, 1875, began at 7 P.M. and lasted until 2 P.M. on the 8th, and was undoubtedly mainly under the influence of storm No. IX. (as charted by Signal Bureau), while passing from Savannah to a position off Cape May. The depression of this storm "became more extended as it advanced, with increasing velocity; the region of precipitation including the entire Southern and Middle States." By 7 P.M., closely following this attack, was an attack of the regular neuralgia, which lasted 27 hours, to meet the requirements of Storm VI.; and this is a general rule, that these unusual attacks are followed by the regular neuralgia.

The attack of September 29 and 30, 1876, was under the influence of storms IX. and X. of that month. The weather report of the Signal Bureau says: "The map of the 29th, 4.35 P.M., shows that at that time a very large area of low pressure must have existed in British America on the south and east of James Bay, the southern end of which extended southward until on the morning of the 30th, the barometer was below 30 inches everywhere east of Lake Superior. The winds of Georgia and Indiana during this time were from east to southeast.

The attack of April 3, 1877, belongs to Signal Bureau Storms, Nos. II. and III. "An extensive area of cool northeasterly winds prevailed throughout the Gulf States, Ohio Valley, and Lower Lakes." In Middle Atlantic States, northerly winds moving to east with increasing cirrus and cirro-stratus cloudiness. The general depression extended over a large area. The attack of August 3, 1877, belongs to storm marked II. on monthly report. "There was a marked fall of the barometer in the Southern Atlantic States on the 2d, which district was then, in all probability, in the N. W. quadrant of an extensive depression." "N. E. winds prevailed from New York to Florida." The neuralgia attacked at 11 A.M., and at this time in the direction of the storm S. E. there were increasing cirrus and cirro-stratus with bunches of cumuli lower. This storm "united with No. I. over the St. Lawrence. Later in the day thunderstorms in northwest to northeast." The attack of May 31, 1879, corresponds to the extensive storm of No. XV. of Signal Bureau Report for the month.

The attack of October 16th corresponds to Storms IV. and V.; the former coming up the Mississippi Valley unites with the latter from the North Pacific, in Lake Michigan.

The attack of April 10, 1881, is related to Storm III., including Storms II. and IV. as described by the Signal Bureau Report.

It was observed on this occasion, as is frequently the case with this variety of pain, as also in the ordinary kind, that there was a cloudless sky with a delicate milky sheen in the atmosphere, more marked around the horizon. This milky veil becomes more opaque, and the first pronounced cloudiness will be small patches of cumulus, at lower elevation than this hazy appearance. These are storm indications, and favorable for the production of pain. This was the stabbing variety, as in each case here described, added to the other varieties, and was active between the heel and left side of foot.

The attack of February 11, 1882, corresponds to Storm VI. as marked in report of Signal Bureau. At the time attack began, the centre of the storm was six hundred miles westward. This was of wide lateral range and is the only one charted for the month as coming from the Pacific coast.

For the attack of November 17, 1882, Prof. Carpmail,

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[1] Prof. Loomis, in Amer. Journ. of Sci. and Art, July, 1875.

Superintendent of the Toronto Observatory, reports more than ordinary declination and force disturbances from the 10th, including the 16th, when "they evidently showed signs of a coming storm." The magnetic storm set in at 5 A.M. on the 17th, and continued with great and intermitting force all day and night, and did not quiet down till midnight of the 18th. The report says, referring to the evening of the 17th, "that the force (horizontal and vertical) instruments, which in the early part of the storm showed a general decrease, now showed an increase, and between 7 P.M. and midnight, the lights several times travelled to both ends of the paper; the bifilar going off a number of times." The extremes of declination were reached easterly at 6.25 P.M., and westerly at 9 P.M. On the 19th, the magnets were disturbed, the disturbances being greatest between 11 P.M. of the 19th and 4 A.M. of the 20th. Many of the force movements were swift and rapid, the last movement of importance occurring at 9.20 P.M. on the 20th. Brilliant auroras reported on the 17th. This storm was unusually severe in England with brilliant aurora on the 17th. The disturbances here probably did not differ materially from those reported from the Toronto Observatory.

There was from the 10th instant, great unrest in all the nerves of the foot, such as feelings of twitching and slight burning, and at no time did the agitation touch the zero line of no pain. At 2 P.M. of the 17th the intense stabbing pains set in and reached the maximum power from 4 to 7 P.M. They continued, however, with great force until 5 A.M. on the 18th, and intermitting and less strong fits of torment were felt till evening; then a period of rest occurred until 9 A.M. of the 19th, when a severe attack of the regular neuralgia set in, with more or less burning and twitching pains throughout the foot, which lasted more than thirty-one hours, and finally went off on the evening of the 20th. The intense neuralgia of the 17th seems connected with the magnetic storm of the 17th, for there was no storm of barometric depression charted by the Signal Bureau within neuralgic range for this date. The last storm preceding this time was storm No. II. which started from the Pacific on the 8th, and for which there was a regular neuralgia on the 9th and 10th. The next storm was No. III., which originated in Texas on the 18th, and the attack of pain of the 19th and 20th was for this storm aggravated by the magnetic condition of these dates. It is firmly believed that neuralgia accompanies intense auroral periods, but owing to their rare occurrence, it cannot be said that the proof is conclusive. The conjunction of the two seems too frequent for mere coincidence.

In regard to treatment, etc., I can say but little. There has been no treatment in a medical way of late. I have had good health, take a great deal of exercise, but in a rather irregular way; my appetite is always good, and I sleep well, except when the disturbance of neuralgia interferes. For the year 1878, in which occurred the greatest diminution of pain for any year, there was the greatest physical weight, reaching one hundred and ninety pounds. Physical exercise, nutritious food (have found milk most fattening of all) and light, aggreeable occupation, are, I found, the best regimen for this neuralgic subject.

Dr. Harrison Allen, then presented

A CLINICAL STUDY OF THE CRANIAL NERVES.

The cranial nerves at their nuclei of origin and in the course of their intrinsic fibres may be involved in diseased action. It would seem to be more than a coincidence that the nuclei of the ninth, tenth, and eleventh nerves are arranged in a definite series, forming the trineural fasciculus; and that the nerves themselves are associated in function. But this line of reflection is useless when applied to the nuclei of the sixth and seventh nerves. These nerves appear to have no function in common, and yet they arise, in part at least, from the same nucleus. In their range of variation they have no relation with one another; nor in any animal known to the writer does the sixth nerve spring from the facial trunk, but always (in variations from the human type) from the third. The third, fourth, and sixth nerves are naturally associated; but no reason is assigned for the withdrawal of the nucleus of the sixth from the mid-brain, where the nuclei of the third and fourth nerves lie, to the hind-brain, where it is in association with an alien, namely, the seventh. Associated paralysis of the third, fourth, and sixth nerves is common; but paralysis of the sixth and seventh is rare.

The different symptoms of encranial paralysis may be assigned to one of two groups of causes, viz., to pressure, or to injury. Pressure may affect a nerve remote from the origin of the pressure. A tumor of the cerebellum, for example, has been found to be associated with a facial palsy, although neither the nuclei nor the intrinsic fibres of the seventh were involved. Clinical reports do not discriminate between the direct effects of injury and the indirect effects of pressure. Until the influence of this pressure is known and in each case eliminated, the study of localization of diseased action in the brain must remain in an unsatisfactory state.

Among the localities in which the effects of local pressure have been determined may be mentioned the pontal portion of the medulla oblongata, at which place the inferior vermiform process of the cerebellum may press against the nuclei of the cranial nerves there situated; the third ventricle, where, from a tumor in the corpora quadrigemina, or the pineal body, the lymph of the lateral and third ventricles accumulates in these chambers, and presses downward, notably at the floor of the third ventricle and the lamina cinerea; the region of the hippocampus in the descending horn of the lateral ventricle, which may be distended by the accumulation of fluid in senile states of the brain. Even where the fluid from the larger ventricles is conceived to pass freely along the iter to the fourth ventricle, it is fair to suppose that if this fluid is excessive in quantity, undue pressure will be exerted on the walls of the iter, and that some instances of paralysis of the third and fourth nerves might have their origin in this way.

The causes due to injury of the nerves are of two kinds—primary, when the lesion is due to the direct pressure of a tumor, or a clot of blood; and, secondary, when it is caused by the deteriorating influence of a tract of degeneration in the neighborhood.

Of the first-mentioned, that is to say, of the effects of primary pressure, there is abundant clinical evidence—indeed, it is the only evidence which is indubitable. Of the second, it must be acknowledged that the evidence is purely hypothetical; and as far as the writer knows, no case can be adduced in its support. It may be more than a coincidence that the study of frontal (transverse) sections of the medulla and of the stem of the brain shows that the nerves most commonly paralyzed in hemiplegia of encephalic origin are those whose intrinsic fibres lie in the immediate neighborhood of the pyramidal tract, as this has been defined by Türck, Flechsig, and Charcot. Thus the third, sixth, seventh, and twelfth nerves would be easily influenced by diffusion from the tract of degeneration, while the remaining nerves of the series would escape.

Dr. Charles K. Mills said that the subject touched upon by Dr. Allen was one of great interest to him. With reference to the effects of pressure upon the nuclei of the cranial nerves, he said that, without doubt, some extraordinary and apparently inexplicable affections of cranial nerves were due to such pressure. Intraventricular effusion, however, such as occurs in hydrocephalus, was not likely to produce local paralysis or spasm, because, owing to the free communication between the various ventricles, unless such effusion took place suddenly, the nerve-centres and conductors seemed to accommodate themselves to the pressure, which was distributed over a large area and over nearly all districts alike.

Those cranial nerves which had the greatest peripheral exposure, and the longest and most tortuous course in bone and membrane (the facial, oculo-motor, etc.) were most liable to be affected by syphilitic, rheumatic, gouty, and other similar diseases.

He supposed that the facial and abducens were so often affected independently, because paralyses of these nerves were usually peripheral; the lesions causing them being situated not only beyond the nuclei, but commonly beyond the superficial origins of these nerves. Besides, some authorities claimed separate, although near, nuclei for the sixth and seventh. He had, however, seen more than one case of conjoint paralysis of the abducens and portio dura, presumably due to degeneration of the combined nuclei.

He recalled one case, which he did not think had been put on record, but was well worthy of being detailed in connection with a study of these affections of cranial nuclei. The patient was sent from the South to the Hospital of the University of Pennsylvania by Dr. John Guitéras, and was the victim of complete double oculo-motor paralysis. Associated with this was advanced atrophy and paralysis of both upper extremities. Here he believed the lesion to have been bilateral degeneration of the nuclei of the cervico-brachial nerves, and also of the oculo-motor nuclei. One of the strange features of the case was the fact that the cranial nuclei between oculo-motor and cervical regions (those of the pathetic, trigeminal, facial, abducens, glosso-pharyngeal, etc.) had escaped.

Dr. Mills said, also, that the present was perhaps a good opportunity to put on record an observation on cerebral glosso-labio-pharyngeal paralysis. It is well known that this affection is usually attributed to degeneration of the cranial nuclei; in fact, it is often called "bulbar paralysis." A patient presenting the oral, labial, lingual, and pharyngeal symptoms of this disorder, had died about two years before at the Philadelphia Hospital. Examination showed no lesion of pons or medulla. Along the outer border of both lenticular nuclei, and extending into the external capsule and claustrum, were long, narrow, and somewhat irregular areas of degeneration; softened or broken-down districts surrounded by walls of harder, darker tissue. Kirchoff and others had since reported similar cases, but up to the time of making the observation he had never seen such a case reported.

In conclusion, he said that Dr. Allen had discussed the probability or lateral diffusion of descending degeneration. He thought this lateral extension of degeneration more likely to occur at the top of the system than in the motor tracts, from cell to cell in the central zones rather than from fibre to fibre in the conducting columns. He confirmed Dr. Allen's remarks with reference to the practicability of naked-eye observations of degenerated areas and tracts; and spoke of the brain of a hemiplegic negro murderer, presented by him to the Philadelphia Pathological Society, which showed atrophy of the right cerebral and of the left cerebellar hemisphere, and a connecting tract of degeneration through the pons.

Dr. W. W. Keen referred to one point mentioned by Dr. Allen, the question of the common nucleus for the sixth and seventh nerves, and called attention to an extremely rare and interesting

CASE OF CONGENITAL AND BILATERAL PARALYSIS OF THE SIXTH AND SEVENTH NERVES.

This case he had been requested to see by Dr. George C. Harlan on account of its bearing on the artistic anatomy of the face. Dr. Harlan had reported it in full in the *Trans. Amer. Ophthal. Soc.* for 1881. Dr. Keen had had his face photographed as well as copies taken of a photograph in childhood. Unfortunately the existence of the latter was not known until the more recent photograph had been taken, or the point of view would not have been reversed.

At the date of examination he was eighteen years old. His expression in the second photograph it will be seen had scarcely changed at all from that of the earlier one. His face had simply enlarged. The condition had existed from birth. Not a muscle of the face responded either to the will or to the battery. The corner of the mouth could be slightly depressed by the platysma. Salivation was normal; hearing was good; speech perfectly intelligible, and only affected by the want of control over the lips; taste and sensation in the tongue were unaffected.

There was double internal strabismus; the cornea was slightly dull; vision O.D. $\frac{20}{126}$ and O.S. $\frac{20}{c}$; not improved by glasses; the impairment was chiefly due, apparently, to constant epiphora; ophthalmoscopic examination unsatisfactory, but the fundus seemed normal. Fixation was with the macula in each eye. No diplopia.

The absolute, bilateral, and congenital absence of function of the sixth and seventh nerves, without any involvement of the chorda tympani, points clearly to defective development of the nucleus common to the sixth and seventh nerve, and tends to confirm the assertion of Sapolini (*Amer. Journ. Otology*, Oct. 1881, p. 312) of the differentiation of the chorda by origin from a distinct nucleus as a thirteenth cranial nerve.

In reply to the discussion elicited by his remarks, **Dr. Allen** thought that the manner in which the effects of locomotor ataxia are witnessed in the spinal cord confirmed his own impressions with respect to the manner by which diffusion can take place about a tract of degeneration. It is well known that in this disease the central ravages are not confined to the postero-lateral column in which they are initiated, but extend to the postero-median column, and may even pass over the postero-median fissure. A yet more striking instance is seen in the experiments of Gudden, who extirpated the eyes of rabbits, and observed the change that took place in the optic tracts. It was found that the paths of degeneration were not limited to the visual lobes of the corpora quadrigemina, but had involved adjacent structures by diffusion. The effects of degeneration seen in the peripheral nerve trunks, where they were strictly limited by reason of the medullary sheaths, would not serve as precedents for the localization of similar effects in the central nervous system, where such sheaths are often absent.

THE PATHOLOGICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Thursday Evening, May 10, 1883.

Vice-President, F. P. Henry, M.D., in the Chair.

TYMPANIC CARIES PRODUCING SUB-DURAL ABSCESS OPENING INTO THE LATERAL SINUS.

Dr. Davis presented a specimen with the following history: Neil D., aged 18, was admitted into Prof.

Agnew's ward in the Pennsylvania Hospital with the following history: When he was five years of age, he had measles, and since that time he has had suppuration of the right middle-ear. It discharged at intervals. Two weeks previous to admission he had acute pain in his right ear, and a week later it began discharging. He had severe headache ever since he was first attacked. The pain was situated principally towards the front, but existed also towards the sides of the head. The discharge was profuse and offensive. He was emaciated, his face was haggard, pale, with a slightly yellowish tinge, he had an anxious expression of countenance, and altogether looked very badly. His mother says that this change occurred entirely during the two weeks prior to admission. The ear was cleansed and astringents applied; the discharge ceased in about six days. Bromide of potash failed to relieve the headache, but morphia hypodermically gave temporary relief. He held his neck stiff with the head slightly drawn back. This increased as the disease progressed. He had nausea, and later vomited large quantities of greenish-black fluid. Three days after entrance, the pains extended down the spine and into the legs and to the under side of the arms. On the fifth day after his admission, the headache and pains in the lower extremities were very severe. The discharge had almost ceased. His temperature rose to 102.5°. An ice-cap afforded no relief. On the eighth day he died.

The following statement shows the range of temperature and pulse from the date of entrance into hospital (9th), until his death:

	Temperature.		Pulse.	
	Morning.	Evening.	Morning.	Evening.
9th, . . .	100°	103°	62	86
10th, . . .	101.5°	101.5°	70	96
11th, . . .	98.5°	102.4°	66	80
12th, . . .	99.5°	100.8°	68	84
13th, . . .	102°	102.5°	84	88
14th, . . .	102°	105.4°	100	102
15th, . . .	103.5°	102.5°	106	104
16th, . . .	101.6°	102°	136	114
17th, . . .	99°	100°	112	108

His bowels moved regularly; they were not constipated.

Post-mortem examination, made twenty hours after death.—Skull was very thin at all points. Dura mater apparently normal. Marked congestion of the arachnoid and pia mater, more so on the right side. No evidences of thickening or other disease. Brain normal. No excessive cerebro-spinal fluid.

Region of Right Ear.—Beneath the dura mater covering the petrous portion of the right temporal bone over the middle and internal ear, there was an abscess about an inch long. It communicated by a small opening with the tympanum. At its opposite extremity it opened into the lateral sinus. This was filled with pus from the point of opening to within two inches of the torcular herophili. These two inches were filled with a soft black clot. Below the point of opening to the jugular foramen, there was thick pus and a partly decolorized clot, much firmer than the one extending in the direction of the torcular herophili.

Remarks.—The congestion was active, not passive; it was most marked on the surface of the brain. The large veins were not distended, and there was, consequently, no excess of fluid. The patient's mind was clear to the last. The most marked feature of the case was the emaciation, which was very rapid. An interesting point in connection with the case is the cause of death. It seems to have been due to the entrance of pus into the circulation; in other words, it was probably a case of true pyæmia. He had two marked symptoms of pyæmia—the sallow countenance and the rapid emaciation; besides these he had vomiting. He never had the slightest chill, or the sudden rise and fall of temperature, both so marked in cases of pyæmia. Sweet breath and any external abscesses or lung affection were also absent. I was unable to examine the other organs.

SPECIMENS (LUNGS, HEART, AND KIDNEYS) FROM A CASE OF BRIGHT'S DISEASE.

Dr. Frederick P. Henry presented the organs from a typical case of chronic parenchymatous nephritis. The kidneys are slightly enlarged, extremely pale, with marked arborescent vascularity of the surface and with non-adherent capsules. In fact, they represent one of those instances in which the gross appearance suffices for diagnosis. The heart is slightly enlarged, its left ventricle dilated, its walls fatty, and its valves competent. This heart gave rise to no murmur, strictly so called, but did produce in typical degree the sound called by Bouillaud and Potain the *bruit-de-galop*. Potain considers this sound to be diagnostic of interstitial nephritis, but Dr. Henry said that he had invariably encountered it in cases of Bright's disease in which the parenchymatous affection was predominant. The lungs are congested and œdematous throughout. The pleura is greatly thickened on both sides and the pleural cavities abolished, with the exception of the diaphragmatic portion of the right side, which contains a small amount of fluid in the shape of a number of serous-containing loculi. The cause of death was œdema of the lung, and the interesting question arises as to whether œdema of the lungs, which is so common an event in cases of Bright's disease, may not be favored by the obliteration of the pleural cavity, also commonly present in these cases: or, in other words, and conversely, whether the pleural cavity may not serve as an outlet for effusions which, but for its presence, would infiltrate the lung parenchyma.

Although his attention has not been specially directed to the point which he has just raised, and therefore he has no cases other than that just reported to bring forward in its support, he thinks he can state, in general terms, that before œdema of the lungs occurs, in cases with open pleural cavity, that cavity contains a considerable quantity of fluid. That is to say, that its capacity to act as a drain to the lung tissue is exhausted, and it does not at all follow that, for this result to be produced, the pleural sac should be *distended* with fluid. In fact, it would seem that a moderate amount of fluid in the pleural sac may be sufficient to exhaust this conservative power, and this amount varies with the state of the pulmonary circulation.

The view just advanced is in complete harmony with what we know of the physiological function of lymph spaces, among which the large serous sacs are reckoned. The last volume of *Transactions* (Vol. X.) contains a paper upon pleural effusions, in which Dr. Henry argued that any cause which interfered with a proper expansion of the thorax would lead to congestion of the pulmonary capillaries, thereby favoring pleural effusion. The results of capillary congestion vary in different systemic conditions. In Bright's disease, owing to the altered state of the blood, the result is œdema, that is, a serous infiltration of lymph spaces. Effusion into the serous investment of organs such as the lungs and heart, is conservative so far as concerns the parenchyma of these organs. The practical result of these considerations is that œdema of the lung, in cases of Bright's disease, is favored by pleuritic adhesion; and, secondly, that œdema of the lung may, perhaps, be averted by the timely performance of paracentesis.

MYXOMATOUS TUMOR OF THE SUBCUTANEOUS CELLULAR TISSUE OF THE CHEST.

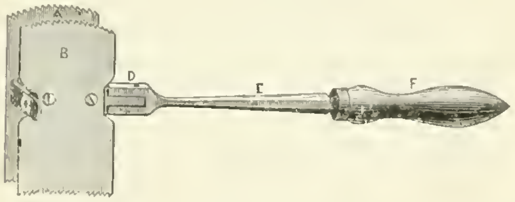
Dr. MacConnell presented the specimen, which was removed by Dr. Allis at the Jefferson Hospital Clinic one week ago. The patient was a man, aged sixty-three years, who stated that six years ago he had been struck on the side of the chest by a box at a spot corresponding to the site of the tumor. The growth commenced shortly after this traumatism, and at the time of operation was of the size of a pecan nut. The microscopical appearances were somewhat the same as those presented by the specimen presented for him by Dr. Nancrede in December, 1882. The present specimen very beautifully illustrates the transitional stages of the fœtal development of bloodvessels, such as budding, etc. Abundant yellow elastic tissue is also seen. The cells are but faintly stained with picro-carmine, owing to the highly refractive substance of the growth (mucin), rendering the coloring of the nucleus indistinct. Dr. MacConnell thought that the apparent rarity of similar growths was due to the use of alcohol for hardening purposes. If such a reagent be used, only the appearances of a young connective-tissue growth will be detected.

NEW INVENTIONS.

DOUBLE-BLADED SAW, FOR REMOVING PLASTER CASTS.

By A. H. MEISENBACH, M.D.,
of St. Louis, Mo.

The instrument consists of two blades (A B,) a shaft (D E), to which the blades are attached, and a handle (F).



The shaft consists of a square part (D) and tapering part (E). The square part D is made in two halves, one half stationary, the other half hinged to stationary part, as shown in Fig. The movable half is kept in position by a spring (C), which has a notch cut in it, and retains the part in position. The blade (A) is attached to the stationary part of the square part of the shaft by two screws, and the blade (B) is similarly attached to the movable part.

The object in constructing it thusly is to allow opening apart of the blades, so as to facilitate cleansing. The blades are 1¾ inches wide, and 2¼ inches long. One side of the saw blade is rounded, the other square; with its rounded side it is possible to saw in angles, as the elbow, over the ankle, etc. The space between the blades is ⅜ inch; the length of shaft is 6½ to 7 inches. The instrument may be made larger if desired; but I find that if the space between the blades is increased, the strip sawn out is somewhat harder to chip out than if it is of the size above described. The saw can be very easily constructed by any instrument maker.

With this instrument I have been enabled to remove plaster of Paris casts much easier and quicker than with anything I have tried. A great objection to plaster shears is that they cannot be used in all situations, and also that there is often not sufficient space between the limb and cast to efficiently insert them, and also that the cutting of the blades is interfered with by clogging by plaster. The saw can be used in all situations, such as bend of elbow, ankle, etc. The mode of using is as follows: Saw down the entire length of the cast to a depth of say ⅓ to ½ inch, then remove the strip thus sawn out with a chisel or any suitable instrument; continue this operation until the entire cast is sawn through, or the portion of cast is reached that is not completely saturated with plaster, and which can readily be cut through by a knife or scissors. When the cast is cut through, it can be removed in the ordinary way, or if it is not desired to remove it, a bandage can be put around it, and thus it can be drawn together, thereby making the cast fit tighter until it is desired to remove it. It is often desirous not to remove the cast, only to tighten it, and for this purpose the saw acts admirably.

CORRESPONDENCE.

CARBOLIC ACID POISONING.

To the Editor of The Medical News.

Sir: A few days ago I had a chance to study the symptoms of carbolic acid poisoning in two children, the one, a boy of 8 years, and the youngest, a girl of 5 years. They were both troubled with *Oxyuris vermicularis* (thread-worm), and I had prescribed carbolic acid, twenty drops, to be added to a pint of water, and used as an injection. But on account of some misunderstanding, the mother had added a large teaspoonful of the acid (which contained by actual measure seventy drops) to a pint of water. She had given both children the above injection about half-past 7 o'clock A.M., and in about five minutes after the administration of the injection, they both fell asleep, and slept for about twenty minutes. After this they awoke, got up from their bed, talked constantly and incoherently, walked about the room in a very restless manner; very soon their gait became uncertain and unsteady, till, unable to maintain an erect position, they fell upon the floor. They were entirely unconscious, their eyes had a wild and vacant stare, and pupils were much dilated. Their breath was charged with the vapor of carbolic acid. The forehead of both children was hot, extremities, however, were of a normal temperature; the skin was covered with perspiration. The pulse was full and frequent. Even after they had been put to bed, they showed constant muscular agitation, and it appeared that they might have convulsions any moment. They did not appear to suffer any pain.

About 9 o'clock A.M., they became more easy and quiet, the muscular agitation gradually subsided, and they fell into a comatose condition from which they could be roused only with difficulty; when they would open their eyes, still having the same wild and vacant stare. During this state, respiration was somewhat laborious and diminished in frequency. About 11 o'clock A.M., the boy, when roused, appeared to be conscious, but immediately relapsed into a somnolent state.

About one hour later, the girl regained consciousness. Soon after that they commenced to vomit and vomited more or less all day. After that they recovered rapidly.

In regard to the treatment, I wish to add that immediately upon my arrival at the house, I washed out the rectum with an injection of water, soap, and castor oil, and not knowing an antidote for carbolic acid, I administered five drops of spts. aeth. nit. every hour, with the view of eliminating the poison by the kidneys.

Respectfully yours,
H. H. Vinke, M.D.

St. Charles, Mo., July 5.

NEWS ITEMS.

NEW YORK.

(*From an Occasional Correspondent.*)

The Code of Ethics in New York.—The warm weather does not seem to impede the activity of the National Code supporters, who have kindly given the writer access to their papers, which show a steady increase in favor of the American Code. The writer's attention was attracted by a letter lately received, and on inquiring whether others to the same effect had come, was handed a package from which abstracts were made. It soon became evident that many who had hastily given countenance to the New Code, saw that they had made a mistake, and frankly and manfully withdrew their support from the New Code, and transferred it to the National Code.

A few examples are given below.

**, ** County, July 2, 1883.

"I examined, last week, a circular containing the honorable names of ***, ***, and a number of worthy medical men, who, it seems to me, wish this war stopped by our yielding to the demands of an uneducated, public opinion, and recognize irregulars, etc., as fit for us to consult with on issues of life and death intrusted to our discretion. . . . I have had little time to investigate the question, and have taken much "on faith." I thought, by that array of eminent names, this was no doubt the judicial vote of the majority of our honorable profession, and determined to be reconciled to it, though it was antagonistic in a high degree to my wishes. Therefore it is that I signed the (New Code) paper.

"I have just opened another circular with a list ot names of physicians of New York City who wish the National Code of Ethics upheld. . . . When I see in this circular the names of ***, ***, ***, and hosts of others whom I esteem, I feel impelled to write this. I submit to the wisdom of the majority. My decided wish is for the success of the regulars in every contest with ignorance, bigotry, dishonesty, and trickery, whether with the laity or amongst professional quacks.

"Signed, ***, M.D."

**, ** County, April 23, 1883.

"For the National Code. Reconsidering my first opinion.

"Signed, ***, M.D."

**, ** County, May 22, 1883.

"I reported, a few days ago, in favor of the 'New Code.' After considering the matter more fully, I wish to place myself on the opposite side, and uphold the National Code.

"Signed, ***, M.D."

New York, April 26, 1883.

"I was, unfortunately, absent at the last meeting of the County Society when the vote was taken on the Code question. Since then, at the solicitation of a friend, and from a superficial understanding of the case, I signed one of the forms which are being circulated by the 'New Code men;' but from the statement presented by your circular I desire to state most emphatically that I favor the National Code.

"Signed, ***, M.D."

A gentleman, whose name also appears on the "New Code" list, says (April 25, 1883), "most decidedly the Old Code; many more have so decided."

Another says (June 3), . . . "be kind enough to omit my name from any list of subscribers to the 'New Code.' I believe I signed a postal card to such an agreement, but would like to reconsider the matter."

Such cases as the above might be multiplied to a greater extent than space in these columns will permit.

In the defence of their cause, the National party have shown much foresight, thoroughness, and activity, as well as a masterly grasp of the situation, and have made more progress in the last five months than have the "New Code" party in as many years. They began work in the very "camp" of the enemy, and were victorious as soon as organized. Their canvass has been eminently successful, simply because they have sought to learn the sentiment of the whole profession on all sides. The three questions have been uniformly asked, "Are you for the National, the New, or no Code?" Thus giving every one an opportunity to put himself on record. They say that the canvass will be continued until every physician in the State has answered who has a right to be heard. The majority in the State at large is still on the increase, as well as that in the State Society, which is a majority of the entire membership.

Among the warm advocates of the National Code (outside of the city, but in the State of New York) are E. M. Moore, President of the American Surgical Association, and Langworthy and Hovey, of Rochester; Didama and Van De Warker, of Syracuse; Miner, Rochester, and Gay, of Buffalo; Bontecou, Seymour, and Ferguson, of Troy; Hutchison, Squibb, and Segur, of Brooklyn; Churchill, West, and Gray, of Utica; Squire, of Elmira; Hyde, of Cortland; Palmer, of Ontario; Govan, of Rockland; Reynolds, of Saratoga; Wise, of Seneca; Dolson, of Steuben; and hosts of other representative men, well known in and out of the State. These and many others, together with the New York City forces, are the men who will cope with the opposition, and who are determined to uphold the National Code of Ethics, and insure its reënactment in February next.

BROOKLYN.

(*From our Special Correspondent.*)

Dr. Thomas Gallaher, not Gallagher, as generally written, who has recently received a life-sentence as one of the leaders in the dynamite conspiracy at London, is a regularly educated physician, having graduated from Bellevue Hospital Medical College in 1879. Soon after taking his degree he made his residence in Greenpoint, and joined the Kings County Medical Society. His appearance was not that of one fitted for stratagem and conspiracy; he was quiet and retiring in disposition apparently. It is generally believed that he has fallen into his distressing position on account of the lot falling to him under the arbitrary rule of some secret society with which he had become entangled.

Dr. David B. Austin, of 251 West Twenty-fifth Street, New York, is accused of causing the death of Mrs. Mary Birchley, of Brooklyn, by instrumental abortion. The accusation is based upon the death-bed statement of Mrs. B., but it is claimed by the Doctor that his operation was for the removal of polypus, and not for the purpose of producing premature labor. The case will be watched with much interest by the profession of the locality. Dr. Austin is a graduate of the College of Physicians and Surgeons, New York, Class of 1866, and has borne a good name and character among his fellow-practitioners.

CHICAGO.

(*From our Special Correspondent.*)

The Professorship of Surgery in the Buffalo Medical College has been offered, so it is reported, to Dr. Roswell Park, of Chicago. Dr. Park is a man of fine attainments, both professional and otherwise, and is at the same time a gentleman of the highest character. He has of late been devoting himself to surgery exclusively; he is one of the surgeons to Michael Reese Hospital, and Lecturer on Surgery in Rush Medical College. Buffalo will be fortunate in such an acquisition.

Rush Medical College is about to build a hospital. The plans are prepared, and the work will be pushed to completion by midwinter. The structure will be located on the north of the College building, and adjoining it, and will have an easy capacity of about fifty beds.

The building has been planned with a view to future enlargement by extensive additions. For this purpose the College has secured a lot of considerable size reaching north of the present hospital site and fronting on Congress Street. It is the design that the hospital shall eventually front on Congress Street. While the hospital is designed to be, to a certain extent, a clinical arm of the College, it is expected that it will be under the direct management of a religious order—two applications having, it is said, been already made for the care of it by such organizations. It will be to a large extent eventually a free hospital.

The District Nurse for the poor has reached Chicago. The scheme begins in a small way with one nurse at the "South Side Dispensary," and one at the "Central Dispensary." These nurses concern themselves with the needs of the out-patients of these dispensaries. They are supported by an organization under the auspices of the "Chicago Society for Ethical Culture." The nurses are to be in every case graduates of some reputable training-school for nurses.

Medical Expert Testimony in the Chicago Lard Investigation.—The facts involved in the celebrated lard investigation now in progress before the Chicago Board of Trade are, very briefly, as follows:

Mr. Peter McGeoch, a speculator in lard, bought of Messrs. Fowler Bros. 500,000 tierces of prime steam lard, that is to say, pure hog-fat. When the lard was delivered, Mr. McGeoch refused to accept it, claiming that it was adulterated with tallow and cotton-seed oil, and he sought to recover damages before the Directors of the Board of Trade.

The case is of special interest to the medical profession, since the microscope and chemistry will furnish the burden of proof in the decision of the case. The chemist of the prosecution, Mr. Delafontaine, a teacher in the Chicago High School, testified that he had discovered (1) tallow and (2) cotton-seed oil in the prime steam lard of Messrs. Fowler Bros. Mr. Delafontaine's test for (1) tallow in the presence of lard is the stearin test, and is based upon the assertion that tallow contains more stearin than lard. A portion of the suspected lard is treated with 9 to 10 volumes of sulphuric ether and absolute alcohol, equal parts; the mixture is well shaken up and allowed to stand for 24 hours, when the stearin (?) is said to crystallize out; the supernatant fluid is decanted, and the residuum washed with the alcohol and ether solution, filtered, dried, and weighed. Pure lard, according to Mr. Delafontaine, contains 1 per cent. stearin, while tallow contains a much higher percentage. Mr. Delafontaine found in the suspected specimens of lard examined from 3 to 5 per cent. stearin, and concluded that the article was adulterated with tallow.

The chemists for the defence, Profs. Remsen, Doremus, Witthaus, Sharpless, Habersham, and Haines, have abundantly demonstrated the unreliability of the stearin test. It has been found impossible to determine the average quantity of stearin in lard and tallow. Profs. Doremus and Haines, in examining different specimens of pure lard, obtained results varying as much as 800 per cent. They established the fact that Mr. Delafontaine's standard of stearin in lard was entirely too low; that lard always contains from 3 to 5 per cent., and more frequently exceeds this amount. They found that the suspected lard of Messrs. Fowler Bros. contained from 3 to 5 per cent. stearin. They demonstrated that a mixture of lard and tallow, according to the stearin test, actually contained less stearin than pure lard.

The conclusion of these eminent chemists is substantially the opinion of Prof. Allen England, one of the greatest living authorities upon commercial organic analysis, who says that it is impossible to determine by a chemical analysis whether a given fat comes from a hog or a beef.

Mr. Delafontaine testified to the presence of the second alleged adulteration—cotton-seed oil, upon the strength of the elaidin test. This test is based upon the fact that when olein is acted upon by nitrogen peroxide (N_2O_4), it is converted into a solid mass, called elaidin. Non-drying oils, of which olive oil is typical, when acted upon by nitrogen peroxide, are converted into elaidin; drying oils, of which linseed oil is typical, are affected very slightly; cotton-seed oil is affected to an intermediate degree. As Mr. Delafontaine performed the test, a portion of the suspected lard was tread with absolute alcohol (which dissolves out the olein but has no effect upon palmitin and stearin), the supernatant fluid was decanted, evaporated down, and treated with nitrogen peroxide (N_2O_4). The specimen became partially solid, and it was inferred that it contained cotton-seed oil.

The chemists for the defence proved the utter fallacy of the elaidin test, and the falsity of all inferences from such data. Two specimens, one of pure lard, the other pure lard with 10 per cent. cotton-seed oil added, were treated according to the method of the elaidin test. The mixture of lard and cotton-seed oil solidified more rapidly than the pure lard. Three specimens of the suspected lard and one specimen of pure lard solidified with the same degree of rapidity.

The absence of cotton-seed oil was absolutely demonstrated by a number of tests, of which the most important were the sulphuric acid and nitric acid color-tests of Prof. Sharpless. These color reactions do not depend upon impurities in the oil, as has been asserted, but are perfectly characteristic with bleached oils, or cotton-seed stearin.

The microscopical evidence, adduced for the prosecution by Mr. Hirsch, as to the presence of cotton-seed oil, was of a trivial character. Mr. Hirsch testified that he had discovered, by the aid of a magnifying glass, a cotton fibre in the suspected lard and asserted from this fact the presence of cotton-seed oil. Mr. Hirsch's testimony was rendered invalid by the defence upon the ground (1) that it requires a magnifying power of at least 50° to 60° to recognize with accuracy a cotton fibre, while the magnifier of Mr. Hirsch had a power of 6° to 8°; (2) that cotton fibres were floating in the atmosphere, and their presence in the lard was accidental.

Dr. W. T. Belfield, Director of the Microscopical Laboratory in Rush Medical College, was retained for the defence, at Prof. Haines' suggestion, upon the 12th of June. He furnished, by means of his microscope, the clearest and most convincing evidence for the defence. Apart from the value of his testimony in this particular case, he has made a discovery of importance in the field of microscopic investigation.

By dissolving fats in ether and allowing them to crystallize out, crystals characteristic of lard and tallow can be obtained. The crystals from an ethereal solution of lard are rhomboidal plates with bevelled ends, while those from an ethereal solution of tallow are plume-shaped, and curved in the form of the italic *f*.

Dr. Belfield dissolves 10 grains of lard in f℥ij Squibb's ether, and the solution is permitted to stand twenty-four hours, when the crystallization is complete. The crystals may be examined in alcohol or perfectly dry. The chemical composition of these crystals has not been determined, as yet, and no theory as to their nature is advanced.

Twelve lettered specimens of lard were submitted to Dr. Belfied for examination, by Dr. Tilly, who kept a careful record of the letters. The results of Dr. Belfield's examination coincided exactly with Dr. Tilly's list. Three of the specimens, pronounced by Dr. Belfield, to be free from tallow crystals, were taken from the suspected lard of Messrs. Fowler Bros.

Dr. Belfield has prepared microphotographs of the lard and tallow crystals, as well from pure as adulterated specimens, and has presented them for inspection to the Directors of the Board of Trade. He states that the characteristic crystals of tallow can be certainly discovered, when the admixture of this fat with lard amounts to five per cent. by weight; that he has reason to believe that even smaller admixtures—say two or three per cent.—can be detected with equal certainty, although he has not as yet had time to establish this latter point beyond possibility of doubt. For this is an entirely new question in science; there is no record of microscopical research upon this subject, and in the few weeks that have elapsed since this trial began, no time has been found sufficient for an exhaustive study of these crystals.

The St. Louis Medical Society and the Revision of the Code of Ethics.—It will be remembered that at the late meeting of the American Medical Association, Dr. Pollak, of St. Louis, on behalf of the St. Louis Medical Society, moved the appointment of a committee to revise the Code of Ethics, which motion was promptly laid on the table. It now appears that this resolution was not authorized by the St. Louis Medical Society, and that Dr. Pollak presented it without consulting his brother delegates. At a late meeting, the St. Louis Medical Society repudiated and condemned the action of Dr. Pollak, with only two dissenting votes.

Public Health in Connecticut.—The monthly report for May of the State Board of Health states that there has not been that marked prominence in any class of diseases that was so marked a feature of the last few months. If consumption be included, however, diseases of the lungs and respiratory system generally still hold the first rank. From all parts of the State, reports of pneumonia are made, with a greater mortality than commonly accompanies this disease, usually added to the statement of its prevalence. In many places, a great increase during May is reported, and generally bronchitis, influenza, catarrhal affections, and tonsillitis are included. Although pneumonia occurs more or less all the year through, still there has been decidedly more than usual for the season. The spring has been unfavorable to consumptives. Several cases of pleurisy and an unusual prevalence of bronchitis are also reported.

As was the case last year, the increased mortality is largely caused by climatic causes over which we have no control. The marked tendency, however, shown by diseases to take on an epidemic character should warn us in time to take every possible precaution against the introduction of cholera.

Measles has continued to prevail very extensively, and has spread from place to place, often followed by severe bronchial complications or whooping-cough, as in Monroe, where three fatal cases were due to pneumonia complicating measles. Measles is reported as very prevalent in Mystic Bridge and Thomaston, in the latter place extending more to the outlying parts of the town and the farm-houses. There has also been almost an epidemic in Winsted. The disease is also reported from South Britain, Suffield, Bloomfield, Guilford, and Hartford, in the latter place quite prevalent. Whooping-cough is quite prevalent in the southern part of the State, and generally wherever measles prevails. Scarlet fever reappeared in Hartford, and diphtheria late in the month to some degree. A case of scarlet fever was reported from Guilford, a few in Haddam, quite a number in Berlin, and of a severe type—one fatal. A case of diphtheria was also mentioned; two or three cases of each were reported from North Manchester; several of scarlet fever from South Manchester, and one fatal case of croup. Scarlet fever is also reported from Greenwich. In Mystic Bridge, Thomaston, Montville, South Britain, a mild type exists; also in Willimantic, Suffield, and Bloomfield; one fatal case is reported from the latter place. Diphtheria is not as prevalent as in previous months of the year. A few cases are reported from Hampton, Wallingford, Westport, and Bloomfield. Croup is fully as often reported as diphtheria, but not so many cases in each locality. Whooping-cough was quite prevalent in Suffield and Monroe.

Malarial diseases are becoming more prominent. The commoner forms are dumb ague and malarial fevers, together with the chronic, ill-defined forms, but occasionally a case of congestive chills is seen.

The eastern part of the State has not as yet been included in the malarial territory, although the line has been pushed to the eastward, and the disease has crept up the border towns at the southeastern end of the State, still there is no general prevalence, even where cases have occurred. Generally, where the disease has secured a footing, reports of a greater prevalence are made—that is, comparing the frequency with that of the preceding months. If last year's reports are taken as a standard, a marked falling off is seen, with exceptions, and especially in the mortality. This, apparently, reached its acme in Connecticut in 1881, for last year shows a decrease of nearly a hundred in the deaths from malarial diseases, and a considerable increase in the mortality from typhoid fever.

Military versus Civil Sanitarians.—A storm has been recently developed in sanitary circles in Bridgetown, Barbados, which has its amusing points, as showing the mistakes into which a sanitarian and even a board of health may be led when a little temper is permitted to sit at the council. It appears that a main road leading into Bridgetown passes through the garrison, and that it occurred to the senior medical officer of the latter that the establishment of a public latrine and urinals on this road would prevent the indiscriminate use of waste lands in the vicinity as depositories of the natural wastes of country people passing to and from the city. In May, 1882, he therefore made a courteous enough application to have the city authorities erect these conveniences with a view to improve the sanitary condition of the garrison and its environs. This communication found its way to the Board of Sanitary Commissioners, through the various offices of the military commander, the colonial secretary, and the governor, and here it remained pigeon-holed for several months, until the senior medical officer, having lost patience, succeeded in getting the colonial secretary to inquire into its fate. The Sanitary Commissioners replied in October that the inspector of the district had been unable to discover any nuisances, and that the Board could not see that any sanitary benefit would result from carrying out the recommendation of the senior medical officer. A conciliatory clause was added that the inspector of police had been directed to coöperate with the military authorities in suppressing nuisances in the vicinity of the garrison.

The senior medical officer immediately returned to the attack. Were it not for the responsible position he held, and the trust that had been reposed in him by his Sovereign to look after the health of her troops, he might be content to fold his hands and say, "All right," let things be; but his duty would not allow him to do this, and he must remonstrate in the most forcible, while respectful manner against the assumption of gentlemen whose experience must be very limited compared to his. As public latrines did not exist on the island, their utility could only be a matter of surmise on the part of the Commissioners, while his personal experience of them ranged from end to end of the British Empire in India. The commanding officer, from his recent service in Bombay, could, he was sure, bear him out as to the present sanitary condition of that city, due to its public latrines, although formerly it was as remarkable for its filth, as Bridgetown and its vicinity. "The stench is so great along the Hastings Road as to be sickening. How can it be otherwise? Considering the influx of thousands of people daily from the country to the town. How are the calls of nature to be attended to? Is it not plain that the people must obey these calls? and it is equally plain that those in authority must make provision for these necessities. Is the Inspector-General of Police to have the guardrooms provided with commodes, etc., to meet the demands thus made upon him," etc. He has further to add, that it is incumbent on him to forward copies of the correspondence on these subjects to the Director-General of the Army Medical Department, who may very likely consider it his province to represent to the Secretary of State for War, the inexpediency of sending white troops to this island whilst it is allowed to remain in its present insanitary condition.

The threat of having the garrison removed leads the Governor to remark: "The question is assuming rather important proportions; send the papers to the Board of Health." This was done, and in March of the present year the Board elaborated an opinion, in the form of a letter to the Governor, which extends through three issues of the *Official Gazette*—April 2, 3, and 5—to the effect that latrines erected on the roadway would be prejudicial to the public health. The Board does not pretend to have the *extensive personal experience* of the senior medical officer; but, being natives, its members have a *personal* knowledge of the place and people. It brings forward Parkes, Murchison, and others in support of its opinion; as thus, in objecting to the latrines: "Prof. Parkes lays it down distinctly that the localizing causes of yellow fever are evidently connected with the accumulation of excreta around dwellings." On the other hand, in favor of the Bridgetown method of segregated droppings, the same eminent authority is quoted: "Owing doubtless to the rapid movement of the air, there is no doubt that the excreta of man and animals, thrown on the ground and exposed to the open air, are less hurtful than sewer air, and probably in proportion to the dilution." The bad odors complained of by the senior medical officer, are by inference acknowledged, because they are defended by another quotation from Parkes: "In China, where fecal matter is so constantly applied in agriculture, the air is often filled with very pungent effluvia, yet no bad effect is produced."

But it is in respect to the odious comparison as to cleanliness between Bridgetown and Bombay, and the charge of unhealthiness against the former city that the Board of Health develops its energies. We now find the cause of the long delay in rendering the opinion. The books and reports required to furnish the necessary data were not obtainable on the Island, and had to be imported from England. On their arrival no time was lost. Tables of comparative statistics follow each other for many pages of the *Official Gazette*. The Board is not satisfied with proving that, for healthiness, the Island will compare favorably with the principal towns of the United Kingdom. It proves that, as a station for white troops, it is not surpassed in healthfulness by any station of the British army, *either in or out of the United Kingdom*.

Then feeling confident in the result of its labors, it dares the issue with the senior medical officer, by requesting that copies of the papers be sent to the Secretary of State for War, and to the Secretary of State for the colonies.

Appended by way of a *coup de grace* to the senior medical officer, is an extract from a report of the Civil Sanitary Inspector, dated April, 1882, *i. e.*, prior to the commencement of the correspondence, showing the insanitary condition of the women's latrines at the artillery barracks.

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending June 30, 1883, indicate that bronchitis has considerably decreased; that typho-malarial fever, influenza, rheumatism, diarrhœa, intermittent fever, pneumonia, and measles have decreased in area of prevalence. There was no marked increase of any disease reported.

Compared with the average for the month of June in the preceding six years, measles and bronchitis were reported more prevalent; and intermittent fever, remittent fever, whooping-cough, and consumption, less prevalent during the month of June, 1883.

Including reports by regular observers and by others, dipththeria was reported present during the week ending June 30, and since, at 11 places; scarlet fever at 22 places; and measles at 17 places.

OBITUARY RECORD.—DIED suddenly in New York on July 8th, JOHN A. LIDELL, M.D., aged 60 years.

Dr. Lidell graduated from the Albany Medical College in 1848. He distinguished himself during the late war by his conscientious and indefatigable service as Inspector-General of the Medical Staff of the Army of the Potomac. At the close of the war he resigned and settled in New York. As a careful student, observer, and writer Dr. Lidell has achieved permanent reputation. His contributions to the pages of the AMERICAN JOURNAL OF THE MEDICAL SCIENCES were numerous and valuable, and the last number contains an able and thoughtful article on *Contusions of the Brain and Spinal Cord*, which is probably the last contribution to our literature from his pen.

NOTES AND QUERIES.

CORRIGENDUM.

IN the issue of July 7, page 21, second column, first line, for "hours" *read* "days."

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JULY 2 TO JULY 9, 1883.

RAYMOND, HENRY I., *First Lieutenant and Assistant Surgeon.* Granted leave of absence from July 4, 1883, to September 1, 1883, with permission to go beyond sea, and resignation accepted, to take effect September 1, 1883.—*S. O. 150, A. G. O., June* 30, 1883.

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ORIGINAL LECTURES.

ON INFANT FOODS.

A Lecture delivered by invitation before the College of Physicians of Philadelphia.

BY PROF. ALBERT R. LEEDS, PH.D.,
OF THE STEVENS INSTITUTE OF TECHNOLOGY, HOBOKEN, N. J.

IN attempting to discuss the problem of infant foods, I shall begin by assuming that the natural food of the human infant is the best infant food. Without pausing to give the grounds on which it is based, I shall merely add, that the conviction has constantly strengthened with the progress of chemical analyses of human milk and of the various substitutes which have been proposed, that the above assumption is the safest and least presumptuous one which can be made in the present stage of theoretic and practical knowledge.

But what is human milk? To answer this question satisfactorily, we should know at least three things: 1. All the components; 2. Their relative proportion; 3. Their chemical and physiological properties.

Strangely enough, present knowledge on all these points is very far from satisfactory. With reference to the first point, it is sufficient to state that no complete analysis of woman's milk has yet been made. As to the second, I am not referring to the fact that the milk necessarily varies with the interval since parturition, the nutrition and constitution of the mother, and numerous other variable elements, but to the much more important one, that the average composition of the milk of healthy nursing women is by no means satisfactorily established. You will be surprised, I think, on turning to the literature of this subject to find how widely different are the figures obtained by investigators, and variously adopted, usually without critical consideration, in works treating of the nutrition and diseases of children. Finally, in reference to the third point, our knowledge of the properties of the components themselves is extremely meagre. We know, as yet, very little concerning the true nature of the nitrogenous bodies, which are lumped together under the head of albuminoids. And as to the fat of human milk, no separation into the many oily and fatty bodies, of which it is made up, has as yet been attempted.

It may be said that this is foolish hypercriticism—that if we do not know everything, we know sufficient to conduct the nutrition of infants on a sound basis of adequate knowledge. But many reasons could be given under the heads previously specified for regarding the last assumption as premature. Our time will not permit us even to allude to these, but will enable us to speak only of the one practical issue which it is our business to deal with this evening. This is, granting that woman's milk is the best infants' food, in what manner should the nature and proportions of the components be determined of any substitute we may be necessitated to employ? Certainly, only by knowing, in the first place, the average composition of human milk.

As this point is fundamental, and as the wide diversities I have just alluded to existed concerning it, I have thought it well to devote the past four months to its study. In this labor I have had the cordial coöperation of Dr. A. M. Thomas, Chief of Medical Staff of the Emigrants' Asylum and Hospital, and, during the later part of the inquiry, of Dr. K. Parker, of the Infants' Asylum of New York. Both of them have given their personal attention to the collection of the samples, which, in every case, were taken from healthy women, mainly young and primiparæ. All the points of interest, with regard to the history of the women, the child, and the sample, have been tabulated and coördinated, and will probably be published in connection with a future monograph devoted to the topic of human milk. This would not be a proper place for these details, further than adding that the samples usually amounted to two ounces, were taken in most instances two hours after time of last nursing, and were generally the entire contents of the gland.

The sources of variation in the multitudinous analyses of woman's milk that have been previously published, are principally three in number—the most important being the differences in the methods of analyses; next, the variations in the constitution of the milk itself; lastly, the circumstances connected with the collection of the sample. Without delaying to discuss these matters, which would require much time and precision of statement, I shall bring before you to-night only so much of the results thus far obtained as are needed for our present purpose. They are to be regarded as an approximation, to be still further modified by incorporation of the results of other analyses still in progress.

Analyses of Forty-three Samples of Woman's Milk.

Reaction uniformly alkaline.

	Average.	Minimum.	Maximum.
Specific gravity, . .	1.0317	1.030	1.0353
Water, . . .	86.766	83.34	89.09
Total solids, . .	13.234	10.91	16.66
Total solids not fat, .	9.221	6.57	12.09
Fat, ...	4.013	2.11	6 89
Milk-sugar,. . .	6.997	5 40	7.92
Albuminoids, . .	2.058	0.85	4.86
Ash, ...	0.21	0.13	0 35

Not only was the reaction alkaline when the samples were fresh, but, with one exception, in which it was neutral, this alkalinity was found to remain twenty-four or more hours after.

The most striking feature in these analyses is the great range of variation in the amounts of certain constituents, more especially in the albuminoids, the maximum, 4.86 per cent., being nearly six times the minimum, which is only 0.85 per cent. The next most variable constituent is the fat, the maximum being more than three times the minimum. Then come the saline matters, nearly three, the last of all the milk-sugar, which differs but little from the mean (6.997 per cent.) in most samples. In other words, the most striking peculiarity in woman's milk is not the constancy, but the great variability in its composition. Furthermore, this variability is by far the greatest in the constituent most essential to nutrition, the albuminoids, and diminishes in degree of variability in proportion as the constituent becomes less and less essential to nutrition, becoming very nearly constant in the case of milk-sugar, the function of which is not nutrition but heating; by which nature appears to intend to teach us that the rate of nutrition in an infant may safely vary within wide limits, but that the animal heat of an highly organized and rapidly developing creature must be maintained *coûte qu'il coûte.* To maintain at a temperature somewhat exceeding that of an adult, a creature whose vital processes on the one hand are of great activity, while on the other hand the supplies of heat due to cerebral impulses and self-originating locomotions are extremely small, requires the rapid consumption of available fuel, and the abundance of carbohydrates in the milk supplies this most imperative want.

Without stopping to draw out the significance contained in the proportionality of the constituents, both as considered in themselves and as compared with the new-born of other mammalia, let us hasten on to the comparison of human milk with its nearest analogue. This is properly asses' milk, but as this is not and never will be generally available, it will be more profitable for us to consider the cheap and universally accessible cow's milk. For a similar reason, I shall not institute a comparison between the above average and that of the rich milk of blooded cattle, the Alderneys, Jerseys, and so on, nor with selected samples from the best ordinary milch-cows. Rather, as such comparison will be of greater practical utility, I shall adduce the analyses of unadulterated whole commercial or "market" milk. And as this market milk is itself the average of a great number of samples, it is useless, so far as it is concerned, to give the maxima and minima of its individual constituents.

As determined by methods identical with those employed in the analyses of woman's milk, I shall state, therefore, the following results, obtained upon samples of unadulterated cow's milk, such as is sold by farmers in New Jersey to the citizens of New York and Philadelphia.

Analyses of Eleven Samples of Whole Market Milk.

Water,	87.7	per cent.
Total solids,	12.3	"
Total solids not fat,	8.48	"
Fat,	3.75	"
Milk-sugar,	4.42	"
Albuminoids,	3.42	"
Ash,	0.64	"

As in the case of woman's milk, the slight discrepancies noticeable are due to the fact that the figures for "total solids" were those obtained by appropriate separate determinations, and of course do not precisely agree with the figures obtained by mere addition of the solid constituents.

Before proceeding to make a comparison, I wish to quote here the results given by König (*Chemie der mensch. Nahrungs- und Genussmittel*), deduced in each case from the analyses of many hundred samples of woman's and cow's milk, and to call attention to the fact that whilst these results include determinations effected by very many and diverse methods of all descriptions of samples, and present a distinction between caseine and albumen (a distinction which cannot be sharply effected by present analytical methods), yet as a whole they are similar to and support the inductions which I shall base upon the analyses above given.

Woman's Milk.

	Mean.	Minimum.	Maximum.
Water,	87.09	83.69	90.90
Total solids,	12.91	9.10	16.31
Fat,	3.92	1.71	7.60
Milk sugar,	6.04	4.11	7.80
Caseine,	0.63	0.18	1.90
Albumen,	1.31	0.39	2.35
Albuminoids,	1.94	0.57	4.25
Ash,	0.49	0.14	?

Cow's Milk.

	Mean.	Minimum.	Maximum.
Water,	87.41	80.32	91.50
Total solids,	12.59	8.50	19.68
Fat,	3.66	1.15	7.09
Milk-sugar,	4.92	3.20	5.67
Caseine,	3.01	1.17	7.40
Albumen,	0.75	0.21	5.04
Albuminoids,	3.76	1.38	12.44
Ash,	0.70	0.50	0.87

The same striking peculiarities are noticeable in the above analyses of woman's milk. The greatest variable is the albuminoid constituent, the maximum being more than seven times the minimum; the most nearly constant is the milk-sugar, varying little from the mean of 6.04 per cent., which is likewise the largest of the solid constituents.

When we compare woman's with cow's milk, it is the great differences and not the similarities which surprise us, and demand study, recognition, and utilization in the solution of the problem of artificial infant's food. In woman's milk we have a persistently alkaline liquid, of a somewhat animal, usually disagreeable, and very rarely sweetish taste, of somewhat greater specific gravity (1.0317) than cow's milk (1.029). Although it has less water, and greater total solids, and total solids not fat, than cow's milk, it is by no means so opaque, and with its thin and watery consistence gives us a notion the reverse of true with regard to its real composition. Agreeing with cow's milk in the fact that the milk-sugar in both is the chief solid, it differs in that its milk-sugar largely exceeds the milk-sugar of cow's milk. It likewise exceeds in fat. In albuminoids it falls far below. And whilst by present modes of analysis the separation of the so-called caseine from the so-called albumen is not accurately performed, yet the results are approximately correct, and have a very great value in pointing out the most important of all the differences between the two secretions, which is that the fraction of the total albuminoids in cow's milk which is coagulable by acids is far greater (perhaps four times) than the non-coagulable part.

In woman's milk, on the contrary, the reverse is true, and the non-coagulable part much exceeds (perhaps by more than twice) the coagulable portion. And whilst the absolute amount of ash is less, the relative amount of potash is greater, in woman's than in cow's milk.

For reasons which will appear further on, it would seem that the best solution of the problem of artificial infant feeding is to be found in the substitution of cow for human milk. But, inasmuch as the secretion of the herbivora is radically and in all particulars different from that of the omnivora, cow's milk is profoundly altered, so as to assimilate, in the ratio and nature of its constituents, human milk.

To discuss the various methods by which it has been proposed to effect this result would far outrun my present scope, which is only so much of the general discussion as relates to the influence exerted upon cow's milk by the addition of the various articles of infant food now manufactured and offered for sale. This influence, we shall find, is chiefly of a mechanical or physical character, and does not necessarily involve the discussion of those chemical changes, at present time under investigation in many quarters, the practical results of which have not yet been satisfactorily determined, and belong, therefore, to the future of this subject.

The method hitherto employed is spoken of as mechanical for reasons based partly on the practice of physicians and partly on laboratory experiments. The mere addition of water to cow's milk is sufficient to reduce the percentage of albuminoids to the same amount as its percentage in human milk. But this addition does little to diminish the size and compact character of the clot of cow's milk. This last is effected, as far as it actually is effected, which is only partially, by the addition of the various attenuants composing manufactured infant's food, whether that attenuant is starch, gum, sugar, dextrine, or other bland nutrient. This explanation of the utility of manufactured infant's foods accounts for the seeming anomalies in present medical practice, which at first sight appear very startling and inconsistent with generally accepted physiological doctrines. For whilst admitting that the secretions of the salivary and pancreatic glands are insufficient in the early stages of infancy to digest more than very limited amounts of starch, yet physicians frequently use with good results a farinaceous food like Ridge's, which contains 77.96 per cent. of starch, or like Robinson's patent barley, which contains 77.76 per cent. of starch. But when we consider that the utility of this starch is not in the way of infant's food, for which it is not adapted, but as an attenuant of the large amount of diluted milk with which it is mixed, then the seeming contradiction between theory and practice disappears.

To discover whether this interpretation is in accord with experiment, the coagulation was effected in the presence of similar attenuants. In the first place, the total albuminoids were determined in a sample of whole cow's milk, and were found to be 3.39 per cent. The so-called caseine was then separated by coagulation with acetic acid, and amounted to 2.42 per cent. On boiling the filtrate, 0.26 per cent. of albumen so called separated out, leaving a deficiency of 0.71 per cent. of albuminoids to be accounted for. A direct determination of the albuminoids in the filtrate from the albumen, gave an additional yield of 0.76 per cent., showing that both coagulation and boiling of the filtrate subsequently had left nearly one-fourth of the total albuminoids in solution.

Ten grammes of the same milk, together with 25 grammes of cane-sugar and 110 c.c. of water, were treated in like manner, the precipitates being exhaustively washed. I obtained:

As precipitated by acid, ...	3.13	per cent.
" " by boiling, ...	0.40	"
Precipitated by copper sulphate from filtrate, .	1.14	"
	4.67	"
Total albuminoids, ...	3.39	"
	1.28	"

In other words, the precipitates carried down with them 1.28 per cent. of saccharine matter, which could not be removed by washing.

Some barley-water was then made and filtered through ordinary Swedish filter paper, the clear filtrate being used in the following experiment. Ten grammes of the same milk as before were mixed with 110 c. c. of the barley-water. I obtained:

As precipitated by acid, ...	5.21	per cent.
" " by boiling, ...	0.37	"
" " by copper sulphate from filtrate, .	1.35	"
	6.93	"

That is to say, the precipitates carried down with them from the clear barley-water 3.54 per cent. of barley extract, which could not be removed by washing. In this case, the attenuants of the clot exceeded in weight the coagula themselves.

An experiment with grape-sugar yielded results closely resembling those with cane. With gelatine a very remarkable result was obtained. Ten grammes of the same milk were added to 110 c.c. of a solution of 1 part of gelatine in 150 parts of water. Although the gelatine was so attenuated, it entirely prevented the precipitation of caseine on the addition of acid, and what is likewise interesting, appeared to arrest decomposition, the white jelly not having altered after a week's standing.

Ten grammes of the same milk were added to 110 c.c. of clear starch-water (filtered through Swedish filter paper). I obtained:

As precipitated by acid, ...	3.07	per cent.
" " by boiling, ...	0.36	"
" " by copper sulphate in the filtrate,	1.08	"
	4.51	"

Or 1.12 per cent of starch carried down and not separable by exhaustive washing.

The utility of diluting cow's milk until its percentage of albuminoids does not exceed that of human milk, and adding some bland attenuant, is obvious. But the special virtues of the *extractive* of barley or oatmeal, as compared with starch, and the relative value as nutrients of sugar, gum, dextrine, gelatine, barley, oatmeal, etc., and their relative advantages when thus employed, have been very imperfectly determined. It is much to be desired that new physiological and chemical experiments directed especially to these all-important factors in infant nutrition should be instituted. I shall have occasion to refer to the same points in connection with Liebig's Foods.

An examination of the great variety of infant foods, the analyses of which are given in the following pages, shows that they can be classified most conveniently under the three heads of Farinaceous, Liebig's Foods, and Milk Foods (including condensed and preserved milk).

I. *Farinaceous.*

A.—Wheat, previously prepared by baking, including:

1. Blair's Prepared Wheat Food; 2. Hubbell's Prepared Wheat Food; 3. Imperial Granum; 4. Ridge's Food.

B.—Mixtures of various cereals:

5. "A B C" Cereal Cream; 6. "A B C" Cereal Milk; 7. Robinson's Patent Barley.

II. *Liebig's Foods.*

8. Mellin's; 9. Hawley's; 10. Horlick's; 11. Keasbey and Mattison's; 12. Savory and Moore's; 13. Baby Sup No. 1; 14. Baby Sup No. 2.

III. *Milk Foods.*

15. Nestlé's; 16. Anglo-Swiss; 17. American-Swiss; 18. Gerber's.

Class I.—A.

	1 Blair's wheat food.	2. Hubbell's wheat food.	3. Imperial granum.	4. Ridge's food.
Water, . . .	9.85	7.78	5.49	9.23
Fat, ...	1.56	0.41	1.01	0.63
Grape-sugar, . .	1.75	7.56	trace	2.40
Cane-sugar, . .	1.71	4.87	trace	2.20
Starch, . . .	64.80	67.60	78.93	77.96
Soluble carbohydrates,	13.69	14.29	3.56	5.19
Albuminoids, . .	7.16	10.13	10.51	9.24
Gum, cellulose, etc. .	2.94	undeterm'd	0.50	
Ash, ...	1.06	1.00	1.16	0.60

1. *Blair's Wheat Food.*—It is claimed that this is prepared from choice wheat in such a manner as to retain all the nutritive constituents and reject those which are irritating or otherwise objectionable. Moreover, that by cooking such physical and chemical changes have been brought about as to facilitate mas-

tication and the subsequent action of the fluids of the stomach, thereby rendering the food more easily digested. It is stated to be especially beneficial in intestinal diseases like dysentery, cholera infantum, etc.

Uncooked, this flour has a sweet pleasant taste. When cooked according to directions it forms a very smooth paste with a faint tinge of color, resembling arrowroot in its flavor and quite palatable without the addition of salt, sugar, milk, or other accompaniments.

2. *Hubbel's Wheat Flour.*—Claimed to be made from wheat alone, floured and carefully baked from eight to ten hours, at about the temperature of boiling water. "It includes all the flesh-forming constituents, earthy and saline elements of the grain, with only a portion of the starch, and of the silicated coating. It keeps without change."

This flour is quite sweet and palatable even in its uncooked form, and when moistened with the saliva is more pasty than the Blair's wheat flour. When cooked it forms a perfectly white, smooth paste, with a very delicate flavor. It is more starch-like in consistency than Blair's, a difference due in part to the larger percentage of starch, and less pronounced in flavor, this being probably due in some degree to the smaller percentage of fat. In both Blair's and Hubbel's the per cent. of gum, cellulose, etc., is extremely small, in the latter so small that it was not determined. In nitrogen Hubbel's is much richer than either of the other two preparations, and its value for purposes of nutrition correspondingly greater. The reaction of Blair's food and of Hubbell's is in each neutral.

The excess in the amount of saccharine matter in Hubbell's food above that contained in ordinary wheat flour induced me to write for particulars of the change which it had undergone. The process, I was informed, is as follows: A large baker's oven is heated to about 340° to 360° F. The flour, contained in shallow Russia iron pans, is then put in, the fire having meantime been withdrawn, the oven closed, and the flour left there about twenty-four hours. When the oven is reopened the temperature will have fallen to 100°, and after sieving, the prepared flour will be ready for use. The flour used is the best grade as made by the roller process, the second grade containing more starch, less gluten, being that bought and used by bakers.

The two following analyses, the first of Hubbell's prepared wheat flour, the second of the flour from which the first was obtained by the process of baking as conducted in the manner above described, are interesting and important as elucidating the nature of the changes thus induced.

	Wheat flour.	Same baked.
Water,	9.02	7.78
Fat,	1.01	0.41
Grape-sugar,	2.34	7.56
Cane-sugar,	2.46	4.87[1]
Starch	76.07	67.60
Soluble carbohydrates,	5.66	14.29
Albuminoids,	7.47	10.13

It will be seen that the flour has lost moisture in baking, and also a portion of its fat. These changes, however, are of little moment compared with the considerable decrease of starch and its conversion into saccharine bodies. The soluble carbohydrates are considerably more than doubled, and this change is one of the greatest value and importance, so far as the dietetic value of the prepared food is concerned. The considerable increase in the percentage of albuminoids I am unable to account for.

3. *Imperial Granum.*—It is stated to be "in composition principally the gluten derived by chemical process from very superior growths of wheat—a solid extract." Dr. Fowler states (*Amer. Journ. Obstetrics*, April, 1882), as the result of his microscopical examination, that if the material from which this preparation is derived contains any gluten at all, the "chemical process" resorted to in order to extract it has at the same time either destroyed it, or so altered its character as to render it no longer recognizable by the usual tests. This is an excellent illustration of the difficulty which is encountered in deciding with the microscope upon the constitution of a cereal after treatment, for whilst Dr. Fowler's statement of the microscopic appearance is in accordance with my own observations, yet as a matter of fact the imperial granum contains 10.51 per cent. of albuminoids. On the other hand this is not sufficient by any means to bear out the statement that the imperial granum consists principally of gluten. According to Dr. Fowler, it is simply coarse barley flour. My own observations make it a wheaten preparation.

4. *Ridge's Food*—It is advertised as "prepared from carefully selected winter wheat," reduced to an almost uniform fineness. The product is then thoroughly cooked by a steam-baking process, which gradually changes a large proportion of the starch into dextrine, excluding only the woody fibre. It is afterwards rendered a little sweet and slightly alkaline.

Dr. Fowler states (*loc. cit.*) that the Ridge's food is apparently barley flour finely ground, and that the odor, dough, and microscopic appearance indicate no other ingredients. I have placed it, in accordance with my own observations, among the wheat preparations. Both Imperial Granum and Ridge's food when cooked are very palatable. Both have a neutral reaction. Both have a considerable percentage of albuminoids, that of Imperial Granum in the two samples analyzed being the higher, and both have a very high percentage of starch.

It should be very carefully borne in mind that wheat flour after carefully baking is extensively altered, and that the albuminous bodies become considerably more soluble in water. A wheat flour, which in its original condition would yield after baking a very considerable amount of crude gluten on washing, after baking will leave a much smaller quantity, and for this reason the percentage of crude gluten in baked flours cannot be roughly estimated by washing and drying. For the same reason a baked wheat flour may be mistaken for barley flour, which gives a non-glutinous dough.

Class I.—B. *Mixture of Various Cereals.*

	6. "A B C" Cereal Milk.	7. Robinson's Patent Barley.
Moisture,	9.33	10.10
Fat,	1.01	0.97
Grape-sugar,	4.60	3.08
Cane-sugar,	15.40	0.90
Starch,	58.42	77.76
Soluble carbohydrates,	20.00	4.11
Albuminoids,	11.08	5.13
Cellulose, gum, etc.,	1.16	1.93
Ash,	......	1.93

5. "*A B C*" *Cereal Cream.*—Stated to be "prepared from the most nutritious and digestible parts of the choicest wheat and barley, with all impurities removed." It appears to be a coarse meal of wheat and barley, but I did not analyze it, the box which I purchased being probably old and its contents spoiled.

6. "*A B C*" *Cereal Milk.*—"Prepared by a scientific admixture of the nitrates and phosphates of wheat with the whole barley; and after adding the required sugar, we have secured an analysis almost identical with human milk. The wheat is first cleansed, then hulled,

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[1] With some dextrine.

coarsely ground, and the surplus starch removed, leaving the nitrates and phosphates. The barley is hulled, crushed, and mixed with a proper proportion of the wheat nitrates and phosphates. The mixture is cooked by steam, desiccated, ground into fine flour, specks bolted out, and the requisite amount of sugar added."

The statement that this food corresponds nearly with human milk in its nutritive ingredients is untrue. The proportion between its various constituents is entirely unlike that in human milk, and more than half consists of starch, a body entirely foreign to milk.

7. *Robinson's Patent Barley.*—"Patent barley, technically, is ground pearl barley. Yet this preparation, while possessing most of the characters of what it purports to be, is somewhat unlike pure barley flour. Its dough is more adhesive, and the white color, together with the mild barley odor, suggest the admixture of wheat flour. No gluten cells are seen, but there are numerous granules unaffected by iodine, and turned red by carmine (albuminous matter). The microscopic examination shows starch granules free and in bundles, held together by the cellulose. The larger corpuscles are probably those of wheat." I have adopted this description of Dr. Fowler, although I am inclined from my own observations to regard the preparation as merely barley flour.

Class II.—Liebig's Foods.

	8. Mellin's.	9. Hawley's.	10. Horlick's.	11. Keasbey and Mattison's.	12. Savory and Moore's.	13. Baby Sup No. 1.	14. Baby Sup No. 2.
Water,	5.00	6.60	3.39	27.95	8.34	5.54	11.48
Fat,	0.15	0.61	0.08	None.	0.40	1.28	0.62
Grape-sugar,	44.69	40.57	34.99	36.75	20.41	2.20	2.44
Cane-sugar,[1]	3.51	3.44	12.45	7.58	9.08	11.70	2.48
Starch,	None.	10.97	None.	None.	36.36	61.99	51.95
Soluble carbohydrates,	85.44	76.54	87.20	71.50	44.83	14.35	22.79
Albuminoids,	5.95	5.38	6.71	None.	9.63	9.75	7.92
Cellulose, gum, etc.,	......	......	......	......	0.44	7.09	5.24
Ash,	1.89	1.50	1.28	0.93	0.89	Undeterm.	1.59

[1] These determinations are probably higher than they should be, owing to the influence of dextrine upon the sugar determinations, but if there is an error, it is of the same amount in every case.

The first three are dried foods, in brown or granular masses, and very sweet; the Mellin's food looking and tasting very much like pulverized candy. Their aqueous solutions besides this sweet, had an after-taste of alkaline salt. Under the microscope Horlick's food exhibited very few starch granules, some cellulose, hairs of wheat, but mostly dark bundles of entirely unrecognizable granular matters, probably converted starch. Mellin's food goes almost entirely into solution, and I failed to recognize under the microscope the minute irregular granular matter left behind. The materials sent to me by the manufacturers of Horlick's food, as representing their regular consumption, consisted of fine white wheat flour not baked, good barley malt, and pure bicarbonates of soda and potash. Singularly enough, the reaction of the Horlick food analyzed was acid; that of the Hawley's food was acid likewise, while the Mellin's food was alkaline.

The analyses reveal certain striking points in connection with these Liebig's foods. The percentage of fat is extremely low, that of grape-sugar very high. In Horlick's and Mellin's there is no unconverted starch, in Hawley's 11 per cent. In Mellin's there were 5.95 per cent. albuminoids, and, in both the others, the percentage was very low; that in Horlick's, the larger, being but 6.71 per cent. Hawley's is very light-colored, less sweet than the other two, is more finely powdered, and has a smell resembling that of a cereal which has been submitted to torrefaction. The 10.97 per cent. of starch indicates either that the wheat and barley malt have undergone very partial conversion into grape sugar, or that this percentage of starch has been added in some form after the liquid products of the conversion have been evaporated to dryness.

In my first paper upon this subject (*Sixth Annual Report of the New Jersey State Board of Health*) I fell inadvertently into an error in speaking of Mellin's food. The original table (p. 206 of that article) stated that this food contained 5.95 per cent. of albuminoids, which was correct. Subsequently a second table was prepared for convenience in writing out my work, and into this table the clerical blunder was introduced of including the albuminoids, 5.95 per cent., along with the insoluble residue, 3.46 per cent., and putting down the sum, 9.41 per cent. under the latter head, and thus leaving zero for the percentage of albuminoids. This error I am very glad to correct in this place, as well as the misapprehension into which it led me, that the supposed absence of albuminoids indicated the failure to use wheat and barley-malt in the preparation of this food. On the contrary, the constitution of the food shows that both these articles were used, together with bicarbonate of potash, and the Mellin's is a genuine Liebig's food.

In fact, the percentage of albuminoids in a Liebig's food has not the same relative significance as it has in the case of Class I., or Farinaceous Foods. This point may be best explained by an examination of the analysis of Savory & Moore's Infant Food and the Baby Sups. These are composed of the materials, out of which, by a long and tedious process of conversion, a food like Nos. 8, 9, and 10 is made. This process is as follows: Equal parts of wheat-flour and barley malt, together with a certain amount of wheat-bran added, it is said, for the sake of the adherent phosphates and nitrogenous matter, together with one per cent. of bicarbonate of potash, are mixed with sufficient water to make a thin paste. The mixture is allowed to stand at ordinary temperature for several hours, and then heated to 150°, until the conversion of the starch is completed. It is then strained, and the residue pressed and exhausted with warm water. The extract is evaporated *in vacuo*, at as low a temperature as consistent with rapidity of working, dried at a higher temperature, and, finally, by very skilful, manipulation, brought to a finely pulverulent mass, which does not contain sufficient moisture to cake together, and is a most commendable product of technical skill.

By careful selection of highly albuminous wheat and excellent barley the best results possible can be obtained. What they are, and whether or no the addition of bran increases the percentages of phosphates and other valuable constituents in the extract, I am not prepared to say. I should have very gladly complied with the wishes of manufacturers of Liebig's foods to investigate these matters for them as a matter of ordinary professional labor, but felt that my candid expressions with regard to this subject would not permit me to do so without laying myself open to the imputation of bias. But these explanations suffice to show that the percentages of albuminoids in Liebig's foods have not the same significance as in other classes of infant's foods. The starch has undergone conversion into dextrine and grape-sugar, which, being soluble, pass into the liquid extract, and are evaporated down and pass into the final product. But only that portion of the albuminous matter which is contained in particles so fine as to pass through the strainers, together with the solid albuminous matter (and this is especially valuable in the nutrition of infants), is found in the final product. This deficiency in total albuminoids therefore is inevitable, and is an evidence of the genuineness of a Liebig's food. To determine how large a proportion of these albuminoids passes into *solution* would be of great value. To this end a mode of analysis should be used for these foods, specially designed for them, and this analysis should give not only the varieties of sugar, the dextrine, and soluble and insoluble albuminoids, but the peculiar kinds of extractive. If the virtue of Liebig's foods resides only in their not containing starch, but its products of transformation, gum and dextrine, together with sufficient bicarbonate of potash to make the reaction of the infant food, like milk, always alkaline, then so tedious and expensive a process would not have to be resorted to in order to obtain a mixture which can be made directly very cheaply. If, on the other hand, the other substances extracted from the grain have an important dietetic value of their own, then the analysis should be directed to ascertain their nature and amount. This has hitherto not been done, nor do we possess the records of physiological experiments bearing expressly upon these points of inquiry. In Savory and Moore's food this process of conversion has not been effected. Neither can it be when the food is prepared according to directions. These are to put one or two tablespoonfuls of the food into a suitable vessel, mix gradually, with two or three tablespoonfuls of boiling water or milk, and cool to the temperature of new milk. The conversion of the 36.36 per cent. of starch cannot be effected so readily. If it be (and it is stated that there is no objection (!) to so doing) heated until it thickens, afterwards removed from the fire and stirred until it become fluid, then a greater amount of starch will be converted than when mixed with boiling water only, but there is no certainty nor probability that, in any case, all the starch will undergo conversion. Neither its composition nor its method of preparation explain why, when this food is prepared with water, the food is equivalent to mother's food in nourishing power, and why, as the advertisement likewise claims, when prepared with milk only, it has twice the strength. It is certainly not to the 36.36 per cent. of starch that it owes this power, nor to the 9.63 per cent. of the albuminoids of wheat and barley. In fact, this large proportion of albuminoids shows how much less of wheat and barley has actually been employed in the preparation of Savory and Moore's food, than should have been employed in order to obtain a genuine Liebig's food. For, in the latter, the fluid extract of the wheat and barley is used, and the residual matter, which is not beneficial but injurious in the nutrition of children, is strained off, so that the solid matter remaining after evaporation represents an amount of wheat and barley originally taken greatly in excess of its own weight. In Savory and Moore's food, the percentage of albuminoids is that corresponding to the sum of the weights of the ground barley malt and wheat originally taken. These are added together, along with the alkaline bicarbonate, and, when prepared for use, the insoluble albuminoids and the useless and irritating particles, which Liebig directed should be strained off, are allowed to remain in the food.

I have spoken thus severely of Savory and Moore's food, because, whilst claiming to be prepared in accordance with Liebig's principles, it actually contravenes them. The following much less ambitious preparations are worthy of more favorable comment:

Baby Sup No. 1 is advertised as an excellent substitute for mother's milk, in case of infants under four months of age. It is a very sweet, partly crushed whole oat-meal, very palatable even before cooking, and dissolving readily in the juices of the mouth. It is prepared from malted oats, and, after the conversion of the starch has gone as far as it is thought it will proceed, the oats are carefully hulled, only a residue of the coat being left in the crack of the grain. The analysis shows the lowered percentage of starch, and the increase of saccharine bodies due to this treatment.

Baby Sup No. 2 consists of wheat flour, malted barley, and bicarbonate of potash, in the proportions given in Liebig's formula. In its dry state the mixture has little taste, but becomes thin, sweet, and palatable on cooking. The analysis gives but a partial result of this change, because the food was cooked only five minutes before the analysis, whilst the directions call for a half hour's cooking. But already much of the starch has been converted into dextrine. These foods are commendable efforts to carry Liebig's views into practice, and it is to be regretted that a certain amount of care and time is required to properly cook them, and, for this reason, they will probably have only a restricted use. In Mellin's, Horlick's, and Hawley's foods this care and time have already been expended by the manufacturer, and experience has shown that few mothers or nurses can or will take so much trouble.

Keasbey and Mattison's Foods.—From the point of view above taken, it is possible to explain a peculiarity in its composition, which I failed at first to understand. This is, that the sample of this food which I examined contained no albuminoids whatever. Its advertisement states that it is an extract prepared from malted grain, dextrine, alkaline phosphates, etc., and that it is perfectly free from starch. It does not resemble the other preparations of Liebig's foods in the market, being, unlike them, a thick liquid, resembling, both in taste and appearance, some variety of molasses or syrup. My first explanation of the entire absence of albuminoids was, that no grain was used in its preparation. This is not the case. The food is not strictly a Liebig's food, but in reality a neutralized extract of malted barley. The ground malt is extracted with hot water, the liquid strained, evaporated *in vacuo*, and neutralized with bicarbonate of potash. There is no question that the albuminoids did not pass the sieve, for I could neither determine them by ordinary methods, nor get the reaction for nitrogen by the most severe tests. But, as before stated, there must be present certain extractives, and the analysis should be directed to finding them, and thus seek to explain the undoubted benefits frequently conferred by the use of this food.

Before concluding with regard to Liebig's foods, I desire to say a few words concerning the percentages of dextrine and cane-sugar reported for these foods. The former would be nearly that which would correspond to the difference between the amount of soluble carbohydrates and the sum total of grape-sugar and cane-sugar. But it is not put down in the analysis, because it was not directly determined, and I did not know how much soluble matter of other kinds, possibly soluble albuminoids and other extractive matter of great dietetic value, might possibly be thus erroneously set down as dextrine. The percentages of cane-sugar are not strictly correct, because the presence of dextrine somewhat raises the results obtained, and there is no method, so far as I am aware, of making a satisfactory determination of cane-sugar and grape-sugar and dextrine in a mixture of the three bodies. But the method applied was the same in every instance, so that, besides the cane-sugar proper which is derived from the cereal used, the added percentage due to the error arising from the presence of dextrine would be nearly the same in every sample analyzed. The investigation of this problem should also come into the complete analyses of these foods, as well as the other matters spoken of hitherto. Scheibler, indeed, has indicated a method of detecting dextrine when mingled with cane-sugar in an amount not exceeding 3 per cent.; but in these cases we have, as in Mellin's food, no less than 37 per cent. of dextrine, and 44.69 per cent. of grape-sugar as well, the cane-sugar itself being comparatively insignificant. His method is of no value for such cases.

Class III. Milk Foods.

	15. Nestlé.	16. Anglo-Swiss.	17. Gerber's.	18. Am'can-Swiss.
Water, ...	4.72	6.54	6.78	5.68
Fat, ...	1.91	2.72	2.21	6.81
Grape-sugar and milk-sugar,	6.02	23.29	6.06	5.78
Cane-sugar, . . .	32.93	21.40	30.50	36.43
Starch, ...	40.10	34.55	38.48	30.85
Soluble carbohydrates, .	44.88	46 43	44.76	45.35
Albuminoids, . . .	8.23	10.26	9.56	10.54
Ash, ...	1.59	1.20	1.21	1.21

These articles have been prepared in order to supply a food which should contain the constituents of milk to a certain extent, and yet should be free from the objections to which condensed milk is open. The attempt was first made by H. Nestlé, in Vevey, Switzerland, but at the present time many milk factories are in existence, including one in our country at Little Falls, in New York, under the management of Dr. N. Gerber. All of these milk foods consist of cereals specially prepared in combination with milk. The preparation of the Anglo-Swiss milk food is stated to be as follows: 20 parts of Russian wheat flour and 20 parts of oatmeal are made into a dough and baked. The biscuit is then ground fine, mixed with 60 per cent. of condensed milk, dried by a slow heat at 120° to 130°, ground, and sufficient wheat gluten added to bring up the percentage of albuminoids to the same amount as that present in human milk. It is evident that apart from giving a general idea of the method of manufacture, this statement cannot be regarded as correct, inasmuch as the percentage of fat in the Anglo-Swiss milk food analyzed is much less than that which would be imparted by 60 per cent. of condensed milk, The percentage of albuminoids likewise makes it doubtful whether any albuminoids in addition to those present in the milk and flour, have been added in the form of specially prepared wheat gluten.

According to Dr. N. Gerber (*Milk Analysis*, p. 70), the various milk foods in the market vary in composition as follows:

					Average.
Water, ...	5.0	to	10	per cent.	7.50
Salts, ...	1.5	"	3	"	2.25
Fat, ...	4.0	"	7	"	5.50
Albumen, . . .	9.5	to	18	per cent.	13.25
Soluble carbohydrates, .	35.0	"	55	"	45.00
Insoluble " .	15.0	"	35	"	25.00
Cellulose, . . .	0.5	"	1	"	0.75

It will be noted that Nestlé's food departs further from the average than any of the other preparations, and the American-Swiss approaches most nearly. The percentage of fat in the latter is much larger than in the other preparations, and the percentage of albuminoids is likewise the greatest. On preparing these various brands, the Nestlé, Anglo-Swiss, and Gerber's were very palatable and delicate in their flavor, more so than the American-Swiss, which had a slight rancidity connected, no doubt, with the large percentage of fat and fatty acids. Under the microscope the various milk-foods had a similar appearance, exhibiting agglomerations of starch granules and globules of milk. They all gave the starch and dextrine reaction with iodine, the reaction for dextrine being stronger in the Gerber than in the Anglo-Swiss. All had a faintly acid reaction except Nestlé's, which was slightly alkaline.

All of them have the same points in their favor—a high percentage of albuminoids, fats, and salts, this being especially true of the American-Swiss. The conversion of the starchy matters into dextrine by previous baking gives to this class of infant foods the advantages of that class of prepared cereal, which have been rendered easily assimilated by a process of previous torrefaction. The addition thereto of condensed milk has both advantages and disadvantages. The advantages are that the condensed milk is milk in a pure and safe form. Instead of being coagulated in large, cheesy masses in the child's stomach as would be liable to be the case if the condensed milk, after thinning with water, were given alone to the infant, the admixture of dextrine and torrefied flour keeps the caseine divided, and causes it to form in small flakes more nearly analogous to those forming from woman's milk. The condensed milk likewise adds a noteworthy percentage of fat, which is conspicuously absent from the other infant foods. It also adds a certain amount of milk-sugar and increases the percentage of albuminoids and valuable saline matters, more especially the phosphates. The principal disadvantage is, that condensed milk is preserved with the aid of cane-sugar, its analysis being as follows:

Water, ...	20.0	to	30.0	per cent.
Salt.	1.5	"	3.0	"
Fat.	8.8	"	12.0	"
Albuminoids, . . .	10.0	"	13.0	"
Milk-sugar, ...	10.0	"	15.0	"
Cane-sugar, . . .	30.0	"	45.0	"

Cane-sugar, therefore, being relatively by far the largest constituent, there soon arrives a point in the manufacture of milk food when the addition of condensed milk must cease. Otherwise the percentage of cane-sugar, which like other carbohydrates is very objectionable when it takes the place of a proper amount of albuminoids, would become excessive, and indigestion thereby be induced in the infant using such food. The remedy, it appears to me, would be found by using a condensed milk preserved without the aid of cane-sugar, and since this can now be successfully effected by means of Appert's method, the preparation of a milk food not open to the above objection should be soon satisfactorily accomplished. In that case we should have an infant's food with a very high percentage of albuminoids, fats, and salts; and a low percentage of carbohydrates. The sugar would be present in the form of milk-sugar derived from the milk, and as grape-sugar derived by a process of torrefaction from the meal. The last in its turn would not have to be present in larger amounts than what are requisite to supply the starch and dextrine, which are of use to prevent coagulation of the caseine in large masses.

Condensed and Preserved Milk.

	Condensed (mean of 41).	Condensed (diluted).	Preserved Alpine.	Preserved Amer.-Swiss.	Preserved Am.-Swiss (diluted).
Water, . .	30.34	88.39	58.57	59.21	87.78
Fat, . . .	12.10	2.82	13.21	11.55	3.46
Milk-sugar,	16.62	2.77	15.29	13.04	3.91
Cane-sugar,	22 26	37.1			
Albuminoids,	16.07	2.63	11.36	14.10	4.23
Ash, . . .	2.61	0.43	1.78	2.09	0.62

It will be seen that when the condensed milk is diluted until its percentage of water is about the same as in human milk, it has relatively too little fat and too little sugar (the larger portion of that also being cane-sugar) as compared with human milk. It has also too much albuminoids and ash.

Preserved milk is the result of scientific investigation applied to this subject, and its manufacture marks a great advance in the technique of the milk industry. The product, when diluted, has no cane-sugar (an abnormal constituent of milk), and the ratio of its constituents is similar to ordinary cow's milk. It differs, of course, from human milk, and requires the addition of milk-sugar, fat, and of some bland inert attenuant, like torrefied wheat or barley-flour, to overcome the general objection to any form of cow's milk as a substitute for woman's. Experiments in this direction are on foot, and will probably result in supplying a milk food not open to some of the objections urged against previous preparations of this class. The keeping qualities of the preserved milk are likewise very remarkable; its introduction is a great public boon, and cannot fail to exert a powerful influence upon the future of urban milk-supply, and the alimentation of infants.

Conclusions.—I have been frequently asked why I do not publish my own opinion as to the best of the various foods now in use. To do so would be very unwise for many reasons. But I have endeavored to do what I have regarded as of far more importance than this, which is to praise or blame just as the information afforded by physical and microscopic examinations and chemical analysis demanded, without partiality or bias, and seek out and state the principles upon which, as it appeared to me, the dietetic value of these articles of infant food depended.

To summarize the points which I have endeavored to establish:

1. Cow's is in no sense a substitute for woman's milk.

2. Attenuation with water alone is inadequate, and chemical metamorphosis, or, mechanically, the addition of some inert attenuant is required, in order to permit of the ready digestibility of cow's milk by infants.

2. The utility of manufactured infant's food is to act as such attenuants, and as such they take the place of the simple barley and oatmeal water, the sugar, cream, baked cracker, arrowroot, etc., etc., used in former times.

4. The results of both chemical and physiological analysis are opposed to any but a sparing use of preparations containing large percentages of starch.

5. It is eminently probable that besides acting as attenuants, the matters extracted in the preparation of barley and oatmeal water, and still more the soluble albuminoid extractives obtained at ordinary temperatures (whereby coagulation is prevented), by Liebig's process, have a great independent value of their own. For this reason, instead of employing starch, gum, gelatine, sugar, ect., the use of a natural cereal extractive, containing saccharine and gummy matters and soluble albuminoids as well, such as our great and inspired teacher Liebig himself advocated, is in accordance with the developments of science since his time.

6. The use of a food made up of equal parts of milk, cream, lime-water, and weak arrowroot water, as practised for years by the late Dr. J. Forsyth Meigs, and recently advocated by his son, Dr. Arthur V. Meigs, is sustained by theory, analysis, and practice. It provides for the increase of fat to an amount comparable to that contained in human milk. It adds alkali to permanent reaction, and to convert caseine into soluble albuminates. It adds a little bland attenuant. And if, in addition, the amount of milk-sugar were raised, and instead of arrowroot water, barley or oatmeal water were substituted, as the case demanded, it would approach, it appears to me, still more nearly to the conditions required.

7. The perfect solution of the present problem is to be found in the modification of cow's milk by chemical processes, so as to make it physiologically equivalent to human milk. The nature of these processes and the results to be obtained, are at present so nearly wrought out, that there is good ground for believing that such a solution of this problem is not far distant in the future.

ORIGINAL ARTICLES.

A CONDENSED TABULAR REPORT OF 24 CASES OF HEMORRHAGIC MALARIAL FEVER,

OCCURRING DURING THE PERIOD FROM 1867 TO 1882, INCLUSIVE.

BY E. D. McDANIEL, A.M., M.D., LL.D.,
OF CAMDEN, ALA., EX-PRESIDENT OF THE ALABAMA STATE MEDICAL ASSOCIATION, ETC.

		Color.		Sex.		Result.		Quin'e.					Recov.		Died	
Case.	Approximate Age.	White.	Black.	Male.	Female.	Recovered.	Died.	Taken.	Not taken.	Primary.	Secondary.	Relapsed.	With quinine.	Without quin'e.	With quinine.	Without quin'e.
1	40	1			1	1			1	1				1		
2	18	1			1		1	1		1					1	
3	38	½	½	1		1		1		1			1			
4	25	1		1			1	1		1					1	
5	40	1			1	1			1		1			1		
6	19	1			1	1		1		1			1			
7	40	1		1			1	1		1					1	
8	17	1		1			1	1		1					1	
9	8	1			1	1		1		1			1			
10	11	1			1	1		1		1			1			
11	10	1		1		1			1	1		1		1		
12	10	1		1		1			1	1				1		
13	10	1		1			1	1		1					1	
14	55	1		1		1			1	1				1		
15	35	1		1		1		1		1			1			
16	3		1	1		1			1	1				1		
17	5	1			1	1		1		1			1			
18	26	1			1	1		1		1			1			
Total, 18		16	2	10	8	13	5	12	6	17	1	1	7	6	5	0

Remarks.—All the eighteen cases presented in the above synopsis were of the type referred to in

Dr. James Tyson's paper as *malignant hæmaturia*, called in Alabama *hemorrhagic malarial fever*, and occurred in the writer's practice from 1867 to 1882, inclusive. They exclude all cases of hæmaturia, of hæmatinuria, and of melanuria not attended by the icterode discoloration and the gastric, intestinal, nervous, circulatory, and respiratory disturbances which belong to the make-up of true hemorrhagic malarial fever. In its treatment, every expedient deemed judicious to produce cutaneous action and vascular and nervous reaction and equilibration was unceasingly urged, particularly so in the early stages. Where there was a subjective sensation of great and oppressive heat, with great attendant jactitation and suspirious breathing, the assiduous wiping over of the whole surface of the body in rapid succession with thin towels wrung out of fresh cold water, or filled with pounded ice, was often attended with the very happiest effect and greatest relief. This measure never failed greatly to diminish, and often quite dispelled the yellowness of the surface. Sometimes towels wrung out of hot water were useful, and sometimes the hot and the cold were applied alternately. In the very early stages, perspiration was sometimes secured by hot air, or by bottles filled with hot water introduced under the bedclothes. Almost invariably, when the sweating became free the hemorrhage ceased, and the whole condition improved.

In nearly all the cases, to improve the condition of the digestive tract, from 1 to 4 grs. calomel, and an equal quantity of bicarb. soda, triturated thoroughly with 1 to 2 grs. of loaf sugar, were placed on the tongue to be swallowed with a tablespoonful or two of ice-water, and this was repeated every 2 to 4 hours, until about four such doses had been taken. About four hours after the last of these doses, if their action had not reached sufficiently far down the bowels to be met by enemata of hot soap-water, small quantities of solution of Epsom salts or other saline were given and repeated until the bowels were satisfactorily cleansed. This was found to be the most reliable treatment for the terrible nausea and vomiting.

Henceforth, everything that tended to disturb the stomach, or to increase its existing disturbance, was found to be the worst barrier to success, and everything that tended to quiet the stomach, or to maintain its quiescence, was the surest guide to recovery.

Here lies the point of greatest resemblance between the fever of which we are speaking and yellow fever, and the true reason, perhaps, why quinine is so dangerous and so uncertain a remedy. Some of the cases in the table which died *with quinine* might, possibly, have lived without it, for they seemed to be doing reasonably well until a dose of quinine, given with intent of aiding their condition, seemed to have the contrary effect, and to determine an unfavorable result. In Case 11, quinine had been given to the amount of 55 grains during the twenty-four hours next preceding the attack, and the quinine was continued both by the mouth and hypodermically after the seizure, until ceaseless vomiting and forming abscesses forced its abandonment. The case remained apparently hopeless many days after the quinine was stopped, and hence in the table this case is included with those in the curative treatment of which quinine is marked "not taken." In Case 13, the white boy of ten years of age had a chill (ordinary as was supposed one morning at school; went home with fever at 12 o'clock; took quinine freely during evening and early night, and before daylight took the hæmaturic chill. In this case, if the quinine did not do harm, it surely did no good.

Pellets of ice were allowed to be swallowed or to dissolve in the mouth in all cases *ad libitum;* and in three of the cases, with the view of allaying the sickness of stomach as well as to check the hemorrhage, recourse was had to sugar of lead. In one of these cases only three grains were given and the most given to either one of them was nine grains. The nausea and the hemorrhage were greatly benefited in all the three cases, but all of the three had protracted spells of lead-colic resulting. To soothe the kidneys and to guard against the suppression of their secretion, fluid extract of buchu in fʒj to fʒij doses, sometimes with and sometimes without sweet spirits of nitre, was frequently given in a little ice water. Fowler's solution is nauseating and was therefore always avoided, but a very small pill containing from one-twelfth to one-eighth grain of powdered white arsenic and a little powdered extract of liquorice was often given at intervals of four hours to six hours. I resorted to the hypodermic use of quinine in only one of these cases, and I am disposed to give the method a farther trial.

I do not think that temperament has any relation to the disease.

It will be seen from the table that:

In the 18 cases there were 13 recoveries, or 72.22+ per cent.

In the 18 cases there were 5 deaths, or 27.77+ per cent.

In the 12 cases with quinine 7 recoveries, or 58.33+ per cent.

In the 12 cases with quinine 5 deaths, or 41.66+ per cent.

In the 6 cases without quinine 6 recoveries, or 100 per cent.

In the 6 cases without quinine 0 death, or 0 per cent.

Muriated tincture of iron, whenever it could be risked on the stomach, was thought to be indicated and was freely given whenever well retained. It was a staple in the treatment of convalescents.

Below will be found a tabulated statement of six cases of hemorrhagic malarial fever seen in consultation, or by request of attending physicians, during the period from 1867 to 1882, inclusive. In these cases, as a rule, calomel was used in larger doses, and quinine and spirits of turpentine boldly and freely given. It will be seen that:

The six cases give five deaths, equal 83.344 per cent.

The six cases give one recovery, equal 16.664 per cent.

	Cases.	Approximate Age.	White.	Male.	Female	Recovered.	Died.	Quinine taken.	Primary.	Recovered with Quinine.	Died with Quinine.
	1	28	1	1			1	1	1		1
	2	28	1	1			1	1	1		1
	3	18	1	1			1	1	1		1
	4	43	1	1			1	1	1		1
	5	14	1		1	1		1	1	1	
	6	15	1	1			1	1	1		1
Total, .	6		6	5	1	1	5	6	6	1	5

RIGIDITY OF THE ANAL MUSCLES A CAUSE OF LACERATION OF THE PERINEUM IN LABOR.

BY CHARLES H. CARTER, M.D.,
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EVERY thoughtful practitioner has, no doubt, racked his brain over the perplexing question of preventing laceration of the perineum. The question is touched or reconnoitred by every author on obstetrics, but it can hardly be said that the subject has been *handled*—its etiology and prophylaxis *fathomed*. There are still many mooted points, the discussion of which is far from being closed. There are also questions which are quite pertinent to the subject which have as yet received little or no attention, and one of these overlooked or neglected topics is the subject of this paper.

"Rigidity of the perineum" is a much-abused phrase. It is very frequently applied to a condition of defective distensibility of the perineum proper, or even to diminutive size of the vaginal outlet from a want of development of the structures which surround it. Such a perineum may, in one sense, be *rigid*, but the term should more strictly be applied only to those perinei which are anatomically normal and capable of being distended to a degree consistent with the passage of the normal child at term, but are rendered *rigid* and *undilatable* by a hyperæsthesia of the muscles which form them.

The course to be pursued by the obstetrician in each case is governed by "what's the matter." The causes of laceration or the conditions which tend to bring it about are so various and distinct that no general discussion of the subject would be satisfactory. A classification of the *causes* has, so far as I know, never been made or attempted, but the books are full of suggestions and methods as to how to prevent the lacerations, but scarcely a word can be found bearing upon the primary conditions which render these directions pertinent. The infinite variety of manœuvres recommended shows how much demand there is for light on the subject.

Having had some very embarrassing experiences with perineal ruptures in my early midwifery practice, and especially with primiparæ, I was led to review again the literature of the subject.

There is a certain percentage of cases in which a rupture may be regarded as *inevitable*, even in the hands of the most skilful attendant. The following are the most important of the conditions in which these inevitable lacerations occur: Non-distensibility from lack of proper development in the perineal structures; incompressibility or excessive growth of the child's head; the inelastic state of the vaginal and perineal tissues in females who marry late in life; the narrow pubic arch, constituting the form denominated the "male pelvis;" unnatural positions and presentations of the child; and that peculiar condition of the muscular fibres frequently met with in delicate females, rendering them unable to bear very moderate force without rupture, or that other, possibly similar anatomical condition, bordering on a fatty degeneration of the pelvic muscular tissues, found in women suffering from chronic congestions of these parts, and in those who indulge too freely in stimulating foods and drinks, and especially in the excessive use of malt liquors.

A careful study of the peculiarities of each case, however, and a judicious application of the proper measures at the proper time, may restrict the number of unavoidable lacerations to a much smaller percentage than is at present done. If reliable statistics could be had concerning the frequency of serious lacerations of the perineum, and if the suffering and danger thereby entailed could be duly appreciated, the physician would use every endeavor to honestly cheat the gynecologist by preventing, as far as possible, not only these serious injuries, but the less important ones as well, and the midwife, too often grossly ignorant, would find her services in poor demand.

In my experience, it is the truly rigid perineum that is the most likely to be extensively torn. Everything may be apparently going on well, and the perineum promise to distend easily and amply, but just at the critical moment, when the head presses hard upon the pelvic floor, the muscles contract and the whole structure suddenly gives way.

This contraction occurs more or less regularly, though not very strongly, with each labor-pain, but it reaches its climax only when the head escapes from the cavity of the pelvis and bears down upon the sensitive muscular structures guarding the outlet to the parturient canal.

Let us see what the most important of these structures are. It is evident at a glance that the small, weak muscles of the perineum proper, though they are the ones lacerated, can offer but slight contractile resistance; and moreover, they are quite elastic in the great majority of instances, so that if they were the only obstacles to overcome, the muscular fibres would readily relax, and the fibrous network protect the muscle, while it could retreat as the head advanced. But there is a powerful muscle behind and above these weaker ones which is the *causus mali*, preventing the perineum proper from retreating, and accountable for its destruction. The levator ani, the main plank in the floor, is the offender. By its attachments, its action is necessarily as an elevator not only of the anus, but of the whole pelvic floor. By the intimate interlacement of its fibres with those of the transversus perinei and sphincter vaginæ, relaxation of the latter muscles produces little if any enlargement of the vaginal opening.

That other anatomical *sine qua non*, the sphincter ani, plays also a very important *role*. Its comparatively stationary attachment being posterior, its contraction causes the perineum to recede, while it is itself drawn upward by the levator ani.

Now, in order that the perineum may most certainly avoid injury by the escaping head, it must retreat downward and somewhat forward. This it easily does when it is distensible, provided the levator ani and sphincter ani remain in an uncontracted state.

How can we prevent lacerations depending upon a rigidity of these anal muscles? Certainly not by waiting till the perineum *begins to bulge*, and then carefully regulating the amount of strain upon it. Where this method would succeed, there would be little necessity for "regulating" anything. In the majority of cases where this method is used with good results, and no preliminary measures employed, the parts would probably go through the last step of the second stage of labor unscathed, because regulating the pressure would have little effect upon the muscular contraction if that were sufficiently strong to render laceration "imminent," as such cases have been happily termed.

When the *bulging* has begun, the time for prophylactic measures in such cases is past. No amount of support to the perineal structures will counteract the pressure of the advancing head when the pains are strong. The sudden, spasmodic contraction of the anal muscles exerts a counter-pressure on the presenting part, drawing the perineum over the prominent vertex, and laceration is certain to accompany the escape of the head.

The directions for supporting the perineum, guiding the head upward, allowing head to pass during an intermission of the pain, etc., are all very excellent in their place, and should be carefully studied and practised, but their *place* is subsequent to the preparation of the parts for the emergency they are expected to meet. The various "methods" apply rather to the crisis, when it is too late for them to be of any avail in the class of cases now under consideration.

But the plan herein described, the writer is convinced, will be found efficient in the cases of rigidity of the anal muscles, except in those anomalous, precipitate labors which are occasionally so unexpected and brief as to even preclude the use of *any* preventive measures.

An attempt to solve the problem is described by Mr. Duke in the *British Medical Journal* of March 10, 1883. His method, however, though approaching the real cause of the difficulty, does not reach it, and he, like other writers on this mooted point, does not attempt to classify his cases and point out the essential indications for using his particular method. His theory of "tiring out" the perineum, and his method of accomplishing it, have probably occurred to many others, and doubtless have been put in practice, but that his plan would succeed in those cases where the muscular structures of the pelvic floor were hypersensitive, I very much doubt. His procedure is briefly as follows, and obviously only affects the perineum proper: At that period in the second stage of labor when the head has well entered the pelvic cavity, and the pains effective, during the pain he draws the perineum steadily backward with the fingers inserted into the vagina. Intermitting his traction at the cessation of each pain, he repeats the process till he exhausts the muscles, and sufficient dilatation is produced to allow the head to pass readily.

If the muscles in the anterior portion of the pelvic floor were alone at fault, no doubt the above method would overcome the difficulty, but that such cases are frequent or serious I am unwilling to admit.

The "tiring out" process must be applied to all the muscular structures obstructing the passage, and must be applied in the proper direction.

The hyperæsthetic state of the muscles may be tested, by, in a manner, simulating the action of the child's head upon them. When the labor has well advanced, and the head so far descended as to be well engaged and is making satisfactory progress, two fingers well lubricated with carbolated vaseline are hooked into the vagina, and during the pain the perineum pressed directly downward, separating the fingers as far as possible so as to distribute the pressure and act upon the posterior as well as lateral fibres of the levator ani. If there is marked "irritability" of this muscle, it will be felt to become more or less rigid as the pressure is increased, and relaxed as the pressure is withdrawn. If the test shows the presence of the hyperæsthetic state, the following procedure may be employed to "prepare" the parts for the final act: At the beginning of each pain the two fingers are introduced as before, and the perineum drawn *downward* gently at first, but gradually more strongly as the pain increases, and lessening the traction as the pain subsides. This is repeated till but little force is needed to dilate the vaginal orifice sufficiently to admit three and then all four fingers with ease. By this time the anus is patulous and the sphincter ani exhausted. Drawing the perineum backward leaves this latter muscle in its pristine tonicity; and the levator in the greater part unexhausted. Thus the sphincter is ready to draw the perineum violently backward, and the powerful action of the levator draws it upward just at the moment when the whole pelvic floor should be in a state of complete relaxation.

In cases where the muscles are excessively hyperæsthetic the thumb may be used in conjunction with the fingers, introducing it into the rectum after the sphincter has become relaxed. Mock modesty under such circumstances is reprehensible. There is nothing indelicate in this procedure when the welfare of the woman demands that nothing should be left undone which promises her security against injury. By using the thumb in this way, separate segments of the levator may be successively acted upon, and the exhaustion rendered more complete.

This "tiring out" of the anal muscles causes no apparent increase in the woman's sufferings, being done during the pains. The manipulations are carried out at the time when she is begging the physician to help her, and when the pains are strong she will hardly seem aware that he *is* "helping" her, even when he has all the fingers in the vagina and the thumb in the rectum, firmly drawing downward.

After the muscles are thus exhausted, labor should be completed as speedily as possible. If the pains are becoming weak and inefficient, the forceps may be applied at once, but if there are good pains and everything favorable for a speedy completion of the birth, the best way to keep the muscles relaxed, and also to excite the pains to still greater efficiency, is to keep the hand in the vagina, thus distending the perineum, and just before each pain begins, insinuate a finger between the head and the bony pelvis at the point where the pressure is greatest, and as the pain comes on, indent the cranial bone at that point, and slowly withdraw the finger, and permit the head to descend. Repeating this process with each pain, the head is teased along until it escapes from its osseous vise. At the same time it is guided in the proper changes of flexion and rotation, the pains are excited, and the labor hastened toward completion, and the attendant is not merely bustling about with a pretense of doing something, but is, in fact, *helping* the sufferer.

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MEDICAL PROGRESS.

THE YELLOW-FEVER FUNGUS.—About the time that Koch first published his discovery of the bacillus-tuberculosis, CARMONA, of Mexico, published the results of his investigations as to the germ-origin of yellow fever (*Revista di Medicina y Cirugia*, Feb. and March, 1882). His paper does not seem to have excited the same interest as did that of Koch; indeed, so far as we can ascertain, it has been published in no other than the Spanish language. As to his methods of investigation and their reliability, we cannot, at present, judge, but they should at least be made known, so that competent mycologists can repeat and either confirm or refute his statements.

Carmona found certain similar bodies in the blood, urine, and vomit of yellow-fever patients. The general element, wanting in none of these substances, was a granular matter, only seen with a microscope of 1500 diameters, very abundant, ovoid, and slightly yellow, which appeared to have filaments similar to vibrating ciliæ, and having peculiar movements, with a tendency to repeat these again and again. At rare intervals, it curls itself in its greater diameter, and generally arranges itself on its side, gradually approximating the extremities until they meet; then regains its ovoid form, which is similar to that of the prostate gland. These granulations are capable of increasing or maturing, and, under special conditions, gradually lose their first movement, and then unroll themselves into *spherical* bodies of yellow color, uniform aspect and dimensions, eight or ten times larger than the first granulations. These are from 5–12 mmm. in diameter. These large granulations were those which first attracted attention in the urine of the first patients examined, and since found in the cellular tissues, serum of blisters, and other points of the organism. There were in the urine threads, evidently *mycelia*. Some are so large as to cover the whole field of view; others smaller, and, besides, there were abundant fragments of various forms and dimensions. Some were more delicate, and of a cellular aspect; others more compact and larger, of a brilliant yellow color, and of fatty aspect; some of a more reddish color; others emerald green; still others, but much more rare, of a blue color. Their diameters varied from 2–20 mmm. Cells were frequently encountered, completely empty, of rounded or pyriform shape and variable dimensions. Many of these cells were not entirely empty, but contained a red or yellow granular material, similar to the points noticed in the goldstone. Sometimes they were found conglomerated, with the same aspect as already described, moving freely, and not restrained by the enveloping cellular tissue. Finally, in the same urine were found black bodies of different forms and dimensions, more or less irregularly spherical, others ovoid, and some quite lengthened, as though a mycelial tube had become entirely carbonized.

These different elements were found in all the specimens of urine examined, both in the fatal cases, and in those which recovered. Their abundance in the urine was in direct proportion to the severity of the attack. If the specimen of urine is set away for a few days, there is no change of form in the mycelia, the empty cells, or red bodies; but the primitive granulations and the spherical yellow cells undergo the following modifications: In proportion as the urine evaporated, there was found a great quantity of granular elements, not visible when swimming in the liquid, and appearing as yellowish points of fatty aspect; in some cases appearing as the small points unrolling and being transformed into spherical yellow cells. Specimens were found in which the gradual transition from the elemental granules to the spherical yellow cells was clearly established. These, in turn, underwent different transformations: some underwent the process of gradual regeneration and separation into different fragments. (This was seen once.) In the majority of cases, the cells were gradually involved in a yellow fluid, entirely similar to that contained in the interior; but it did not appear that it transuded from these cells. As this phenomenon was repeated in a large number of cellular elements there were found, from time to time, *lakes* of this protoplasmic substance, in which the primitive cells floated. The contents of these cells are granular, and in one or two points of the circumference there appeared certain rounded elevations, which increased and unfolded into mycelial threads. These threads unfolded by preference towards the border of the object cover-glass, as though seeking the influence of the air, and, in some instances, forming an inextricable web or network with the newly formed threads, which presented an aspect analogous to that seen in certain hedges formed by rods. In the centre of the preparation, the granular elements, as well as the unfolded yellow cells, had a great tendency to collect together, forming more or less vigorous filaments. In the protoplasmic lakes there were frequently seen fat crystals, some of which appeared to be of cholesterine, others of hippuric acid, and still others of tyrosin needles grouped in spherical masses, and forming irregular crosses. These same elements were encountered in the vomited matter, having a white or greenish-yellow color, being especially abundant in large mycelial threads. In some cases, there were ovoid cells, which appeared to be due to the alcoholic fermentation described by Pasteur. In these liquids, the spherical, yellow and elementary granules suffered the same changes as already noticed in the urine. The black-vomit sediment appeared to be formed for the greater part of blackened mycelial threads, and other bodies of different forms and sizes, also black. There were also present yellow or greenish threads and elemental granules.

In one specimen of blood was found a reddish liquid, with coagula in the bottom. No blood-globules could be found; but the granules were very abundant, with very rapid movement, many of them uniting by their slender extremities, and forming small stars. The reddish bodies and mycelial threads were also found. After allowing this liquid to stand for a day or two, the following phenomena were noted: The coloring matter of the blood was arranged along the borders of the preparation, and the entire red field was furrowed in various directions by brilliant yellow threads, the color of which contrasted strongly with the red fluid.

If a portion of the urine be allowed to evaporate spontaneously, and the residue be examined microscopically, the protoplasmic substance, containing abundant spherical yellow granulations, mycelial tubes, and crystals of cholesterine and tyrosin, before mentioned, are seen. The free extremities of many of the mycelial threads were gradually dilated, somewhat resembling the extremity of the olfactory bulb. These dilated extremities Carmona calls *oögonos*, and they measured from 10–60 mmm.

If now a drop of distilled water be placed upon this residue, sufficient to bathe the cells, there will be seen an immense quantity of small, ovoid, slightly yellow granules, with their peculiar movements, and a tendency to unite, laterally, two together, by their small extremities. In a word, these granules are entirely similar to those already described as existing in all the liquids of persons having yellow fever. There is, then, a complete identity between these zoospores found in the different tissues and organisms, some being simply developed forms of others. To this fungus Carmona gives the name *peronospera lutea*, adopting Bertillon's classification of fungi.

These bodies were found in the urine, serum of vesicles, in the cellular, hepatic, and renal tissues, as endospores; in the blood as zoospores.

EXCISION OF HARD CHANCRE.—PROF. LASSAR has come (*Berliner klin. Wochen.*, No. 23) to the conclusion that excision of a hard chancre is an operation which ought to be largely practised. He argues that it can do no harm, that it replaces an unhealthy sore by a healthy, clean wound, and thus offers a chance of preventing the general infection of the system. It is generally taught, however, and we believe truly taught, that at the time of the formation of a hard sore the nearest lymphatic glands are already involved and infected. The eradication of the disease would not, therefore, be possible by the excision of the open sore; just as it would be useless to excise an epithelioma when the glands had already become affected. The question whether it would not be a wise thing to remove any continuing source of infection of the system no doubt arises; and should it be raised, the excision of a chancre is, after all, but a small affair.—*Med. Times and Gaz.*, June 23, 1883.

TUMOR AND FISTULA OF THE UMBILICUS.—DR. TILLMANNS, of Leipzig, reports in the *Deutsche Zeitschr. für Chir.*, Band xviii., the following case, which he believes to be unique, of congenital prolapse of gastric mucous membrane through the umbilical ring. The patient was a lad, aged 13, who presented just over the navel a tumor about the size of a walnut, and covered by deep red mucous membrane. This growth seemed to be attached to the umbilicus by a very thin pedicle. It was irreducible, and its size remained uninfluenced by coughing or by firm manual pressure over the abdomen. From the mucous surface of this tumor there was a secretion, very abundant on digital examination and after each meal, of a turbid and very viscid fluid having an acid reaction, and possessing the chemical and physiological characters of the secretion of the gastric glands. The epidermis of the skin around the tumor was macerated, and, as it were, digested by the action of this discharge. No visible orifice could be discovered on the surface of the tumor, and there was no history of any portion of fluid food or of fecal matter having ever been seen there. The tumor was first observed on the separation of the stump of the umbilical cord on the sixth day after birth. The midwife, in tying the cord, noticed that it was unusually thick near its fœtal attachment. The growth increased slowly in size for about nine years, and then remained stationary. Dr. Tillmanns diagnosed this condition as one of irreducible prolapse of gastric mucous membrane, connected with the stomach by a thin and no longer permeable pedicle. Chloroform having been administered to the patient, the tumor was removed by the knife. No bad symptoms followed the operation, and the lad was soon discharged. The diagnosis was confirmed by microscopical examination of the tumor, which was found to be made up of the different coats of the stomach. The central portion was composed of the serous, subserous, and muscular layers, whilst the outer covering was formed by the mucous and submucous layers. The form of an abundant glandular element indicated that this prolapse had taken place from the pyloric extremity of the stomach. This, Dr. Tillmanns states, had evidently been a case of congenital umbilical rupture containing a gastric diverticulum, a portion of which had been constricted by the ligature applied by the midwife to the umbilical cord, and had thus been cut off, leaving an exposed mucous surface. The pedicle, it is supposed, had been gradually reduced to a very thin cord by the pressure of the margins of the umbilical ring. Dr. Tillmanns has failed in finding any report of an analogous case. In all other cases that have been recorded of prolapse of mucous membrane through the umbilical ring, the protruded part had been derived either from the small intestine or from a patent urachus. This paper concludes with an interesting analysis of recorded cases of such pathological conditions of the umbilicus, as are due to persistence of the vitello-intestinal duct and of the urachus.—*London Med. Record*, June 15, 1883.

COLUTEA ARBORESCENS.—DR. CAMPARDON has recently made experiments with the *Colutea arborescens*, or European (bastard, or false) senna, with a view of determining its therapeutic properties. He used pills containing gr. jss each of extract of colutea and powdered colutea. In a second series he replaced certain purgative pills containing aloes, colocynth, and other drastics by gr. jss each of extract of colutea and extract of colutea powder, for the reason that the rejected drugs gave rise to painful gripings; some of them also producing congestion of the rectal veins, and hemorrhoids. He desired to find a pill which would act regularly and surely in cases of habitual constipation. Six subjects of habitual constipation took from one to four of the pills during the last meal of the day. In all cases the purgative effect was certain, griping being produced in a small number of cases. The pills were used in other cases, sometimes with good results, sometimes with none. In 46 cases, however, purgative effects were produced in 16 only, with a dose of one to four pills. He then used pills composed of extract of colutea and extract of rhapontic rhubarb, āā gr. jss, in some cases āā gr. ij. The patients experimented on, with three or four exceptions, had no colicky pains and always had more or less abundant evacuations. In all, 36 patients took these pills in doses of one to two. One case, however, found it necessary to take six

The pills should be taken during the last meal of the day with the first mouthful of food. Other preparations than the pills are too disagreeable to be prescribed.—*Bulletin Gén. de Thérap.*, May 30, 1883.

Melæna Neonatorum.—Dr. Epstein, of Prague, discusses this subject (*Allgem. Wien. Med. Zeit.*, No. 49, 1882), and points out that the occurrence of hemorrhage from the stomach and intestines of new-born children is by no means uncommon. He considers that a distinct disposition to hemorrhage from various organs must be recognized as belonging to the first few days of life. This disposition is made manifest or increased, when either disturbance of circulation, or disease of vessels, or of the blood itself, is present. The notable alteration in the circulation which takes place at birth must therefore be regarded as a principal cause of the hemorrhage, and especially in cases of protracted labor, or of children born in a state of partial asphyxia, or of weakly children with atelectasis of the lungs. Various conditions have been found in the gastro-intestinal mucous membrane: hyperæmia, hemorrhagic erosions, ulcerations, and actual hemorrhage. In many cases, where the mucous membrane of the stomach has been found sprinkled with small ecchymoses, small rounded ulcers have been discovered; and these have by some authors been regarded as the real cause of melæna neonatorum, the ulcers themselves being brought about by thrombosis or embolism of the gastro-duodenal vessels, secondary to thrombosis in the umbilical vein. This is probably, however, the rarest cause for the hemorrhage; the most common cause being the hyperæmia and temporary congestion of the finer capillary vessels. Although ulceration may take place with extreme rapidity after birth, it would appear that it is usually of intra-uterine origin; and several cases are recorded, where such ulceration has led to actual perforation of the intestine or stomach. Another group of cases is formed by those of children infected with septic diseases or the subjects of hereditary syphilis. In the latter cases the hemorrhage may be the only evidence of the disease, the liver being found free from any syphilitic mischief. In the cases in this group, the prognosis has been clearly shown to be unfavorable. About half of the cases end fatally, and the immediate cause of death is usually the hemorrhage itself. A few cases, however, recover with marked rapidity.

Prof. Widerhofer records an interesting case of melæna neonatorum (*Allgem. Wien. Med. Zeit.*, No. 4, 1883), in which syphilitic manifestations were very distinct, and where hemorrhages had taken place from other than mucous surfaces, the case in many respects reminding one of hæmophilia or of purpura. Such cases he regards as due to the specific affection of the blood. The prognosis is bad, and treatment by hæmostatics is of no avail.—*London Med. Record*, June 15, 1883.

Bicarbonate of Soda in Eczema.—Dr. Rousseau has successfully used a pomade of bicarbonate of soda as an external application in eczema. It seems to alter the morbid anatomical elements of the skin, and restore it to the normal state. The strength of the pomade is: Bicarbonate of soda, grs. xv; lard or other base, ℥iss. When psoriasis exists at the same time, this pomade will cause it to disappear, but it is liable to return, and is then very difficult to cure.—*Revue de Thérapeutique*, July 1, 1883.

On the Entrance of Air into Veins during Operations.—In an article on the treatment of this grave accident (*British Med. Journal*, June 30, 1883), Mr. Frederick Treves points out that it can only occur in what may be termed dry wounds. The wounded vein must be either exposed to the air, or be covered by but a slight amount of blood before it can permit of air being drawn into its interior. In a deep wound filled with blood, the accident is impossible, and the strange exemption of tracheotomy wounds from this complication may be in some way due to the free venous bleeding with which they are often associated. It appeared to him that the best precaution to adopt in cases likely to be attended with the aspiration of air into the veins was to have an attendant ready with a sponge filled with water, which could be squeezed into the wound at the first alarm. With such a measure, no time need be wasted in searching for the vein; the entrance of air would be at once arrested, and, at the most, a little clean water drawn into the circulation. This plan he adopted in two cases. Bearing in mind that the wound is most dangerous when most "dry," it will be understood that the accident has often occurred while a tumor has been torn away from its attachments, and also after a deep wound has been well sponged out.

The second step in the treatment of the accident is to endeavor to remove the air that has already entered the chest. This, he thought, could be best effected by waiting until the next expiratory movement, and then bringing forcible pressure to bear upon the front of the thorax. The air so expressed bubbles up through the water or blood that still fills the wound, and is obviously unable to reënter so long as the wound is protected in the way indicated.

The ease with which a large quantity of air was expressed from the chest in one of the cases reported would render it difficult to endorse Mr. Erichsen's statement when he says: "We cannot, by any compression that we may employ, squeeze the air out of the heart." The elasticity of the chest in the young, the superficial position of the right auricle, and the lax walls of that cavity would appear to be facts opposed to Mr. Erichsen's conclusions.

The suggestion that the air should be sucked out of the auricle through a catheter passed down one of the main veins cannot be too strongly condemned. One of the strangest proposals current is that artificial respiration should be resorted to in these cases. The reasons for this proposal are not evident. There is not only quite enough air in the thorax already, but a great deal too much, and the dyspnœa depends not upon lack of air in the lungs, but upon lack of blood. The only probable effect of artificial respiration would be the introduction of more air into the veins.

Lastly, when all the air has been expressed, the wounded vein should be seized (most conveniently with a pair of Spencer Wells' forceps), and either entirely divided or ligatured. This procedure should be adopted during the expiratory movement. By the treatment advocated, the accident may be immediately dealt with, the entrance of air may be immediately arrested, and the parts placed in a convenient condition for the expression of the air drawn in.

Eucalyptus in Whooping-cough.—Dr. Whittbauer reports four cases of pertussis, treated with tincture of eucalyptus globulus, which recovered in a little over three weeks. The dose for children from two to four years of age was five to eight drops. One of the patients, eighteen months old, suffered from well-marked rickets. After taking the eucalyptus for four weeks, not only was the whooping-cough cured, but the enlarged epiphyses were reduced, and the child, who had never before attempted to stand on its feet, learned to walk (*Memorabilien*, Nov. 15, 1882).—*Edinburgh Med. Journ.*, July, 1883.

Massage of the Uterus.—The scientific manipulations comprised under the term uterine massage may be divided into four groups: 1. Those intended to benefit lesions of which the seat is easily accessible from the exterior; 2. Those which are applied to all the lower abdominal region, and which often constitute a preliminary operation; 3. Massage of the uterus through the abdominal wall; and, 4. Bimanual massage through the vagina and abdominal wall combined. The cases of the first group are generally in superficial subperitoneal exudations, or else situated in the abdominal walls above Poupart's ligaments. Often it is necessary to apply massage to the hypogastric region; the bladder is emptied, and the patient placed on her back on a resistant surface. The operater catches up and presses between the palm and the fingers the skin and superficial tissues. The whole abdominal wall, as far up as the umbilicus, is submitted to this treatment. Then the deeper tissues are subjected to it. These pinchings should be alternated by frictions with the fingers and palms of the hand, the whole operation lasting five or ten minutes. The skin should be previously oiled, and great delicacy be used in the manipulations. In many cases the pains appear to be situated in the abdominal wall, and the massage gradually abolishes this sensibility. After this, one may, if necessary, apply massage through the vagina and abdominal wall simultaneously. When an hypertrophied uterus, for example, can be grasped between the fingers, the hands may be applied flat on the abdomen, the fingers directed toward the pubis; then, by short and steady pressure, the masseuse seeks to grasp the uterus and knead it. More often it will be necessary to apply massage through the vagina. The index and middle finger of one hand are introduced into the vagina, and their extremities, carried into the posterior cul-de-sac, push the neck forward several times, so as to give mobility to the whole uterus. The other hand is placed on the abdomen, and grasps the uterus, the fingers in the vagina serving as a fixed point. When the organ is grasped, it is steadily compressed between the fingers of the two hands for several seconds. This is alternated by lifting up the uterus. Then, the two fingers being placed in the anterior cul-de-sac, the movements already described are repeated. The uterus should be grasped, as far as possible, between the fingers, and subjected to intermittent pressure or kneading. Jackson has recommended that the fingers be also introduced into the rectum. Displacements of the uterus, flexions, and versions have been frequently treated by massage, but without signal success. Better results are obtained in chronic metritis, and especially in cases of old pelvic peritonitis. Massage is positively contra-indicated in any acute accidents or a tendency toward acute manifestations. —*Journal de Méd. de Paris*, June 30, 1883.

Iodine Painting in Smallpox.—In 1881, there was admitted to the Konotop Hospital, a woman suffering from lumbar pain and other prodromal symptoms of smallpox. To satisfy the wish of the patient, Dr. Vetroff painted the whole lumbar region with tincture of iodine. On the next day, the painted region was found covered all over with variolous rash, while the remaining surface of the body presented only two vesicles. The course of the disease was remarkably mild. Having learned this curious fact, Dr. Bojinski-Bojko (*Vratch*, No. 1, 1883), when an epidemic of smallpox broke out in his district, began to paint with iodine the anterior surfaces of the thighs in every patient who came under his notice in the prodromal stage of the disease. In all four cases treated in this way, the rash was strictly limited to the regions painted, and the course of the affection was extremely favorable. An attempt to substitute a sinapism for the iodine gave negative results.—*Practitioner*, July, 1883.

Extirpation of the Rectum, with the Formation of a Musculo-cutaneous Flap.—Prof. Busch refers (*Berliner klin. Wochensch.*, April 9) to an operation described by Hütter, in the year 1872, in which the rectum was extirpated, union between the mucous membrane and the external sphincter and integuments having been secured, so that the distressing occurrence of alvine incontinence was avoided. Only one or two instances of this operation have since been recorded, and in those cancer was the disease to be removed. It is, however, Prof. Busch remarks, in syphilitic stricture of the rectum that the operation is most eligible. This malady is one of the most painful and intractable to ordinary modes of treatment, such as dilatation by bougies or by forcible distention under chloroform, under which treatment the subsequent pain and suffering are most intense, and, when an incision is made, is not seldom attended with severe hemorrhage and fecal infiltration of the adjacent tissues, and consequent phlegmonous inflammation. Should the patient escape these dangers, he is still exposed to a recurrence of the same morbid conditions. For these reasons Prof. Busch operates in such cases, in a manner differing in several points from Hüter's description of his mode of proceeding, and relates a case in illustration.

A woman, aged 35, who had suffered from nodes on her elbows, which had, however, disappeared under the use of iodide of potassium, began to experience severe pain in defecation, the feces being evacuated in small quantities and with difficulty. Examination discovered several polypoid excrescences within the anus; the mucous membrane to the extent of three centimetres was thickened and raised into ridges forming a close, hard stricture, admitting only the end of a finger to the extent of about two and a half centimetres, beyond which healthy mucous membrane could be felt. After careful preparation of the patient, the operation was undertaken on Sept. 8, 1882. A transverse incision divided the raphé in the midst between the anus and the entrance to the vagina, and, curving on each side towards the sacrum, enclosed the anus in a semicircular incision. By division of the muscular fibres of the constrictor vaginæ and constrictor ani, the anterior surface of the rectum was reached. The septum between the anterior wall of the rectum and posterior wall of the vagina had now to be dealt with without opening into either of those cavities; the firm connective tissue could be divided only by the knife, a separation which it was difficult to effect. The posterior wall of the vagina was pressed upwards by an assistant, while Dr. Busch with his left hand pressed backwards the anterior wall of the rectum. Thus the connective tissue was put on the stretch, and the finger of the operator was made aware directly the knife came too near either wall. Moreover, the division was attended with profuse bleeding; every incision divided arteries, some of considerable size, so that altogether fifty catgut ligatures were used. The division, however, was finally effected, and above the stricture soft connective tissue could be felt around the rectum. The rectum was then divided with the scissors to the extent of half its lumen, and its edges provisionally secured to the skin by three strong silk ligatures to prevent it being drawn inwards. The division of the intestine was then completed, and the posterior surface of the stricture was reached from above. The stricture was readily detached from the loose connective tissue which filled the hollow of the sacrum, and the intestine was again divided at about the distance of two centimetres from the anus, the strictured portion, in length about five centimetres, being then shelled out. The lumen of the rectum was more than half closed by the existing sutures of the mucous membrane; the remaining portion of the external part was followed up where it was most easily accessible from the opening of the wound (incision), whilst the contact of the mucous membrane was effected in the slowest possible manner. About twenty sutures were inserted; the perineal wound was again slightly opened; the effused blood readily escaped, and some iodoform was blown in. A drainage-tube was affixed, on both sides, to the nates, and the wound closed by silk ligatures which brought the flaps into their normal position. The anus remained somewhat open, through the division of the motor nerves. The finger inserted could feel the annular form of the sutured intestine, but not any trace of constriction.

The patient was much exhausted by the length of the operation, and suffered for some hours from vomiting. The first free fecal evacuation was passed on September 12th. Some portions of feces passed behind the sutures. A few days afterwards, a feculent purulent discharge appeared at the wound, and escaped also from the vagina, in which a small perforation was discovered. The healing of the wound was retarded by diarrhœa. On January 16th, of this year, the patient's condition was satisfactory. There was a slight mucous discharge from the vagina, but not of a blennorrhagic character. The wound in the vagina, and the perineal incision, had cicatrized. The sphincter ani had perfectly recovered its power. The finger passed into the rectum could detect a slight constriction, through which the whole index finger could be passed without causing pain. The evacuation of even solid feces is easily effected.

Prof. Busch adds the mention of another case of stricture of the rectum in which he had recourse to a similar operation, which, he adds, so far as he knows, has not been employed by any surgeon previously.—*London Medical Record*, June 15, 1883.

OBTURATOR HERNIA.—Very interesting statistics on this rare affection are to be found in a pamphlet on *Hernia* by Dr. B. Schmidt, published in 1882 as part of Pitha and Billroth's well-known series. The cases where obturator hernia has been diagnosed during life are reduced to twenty-five; of these, seventeen were subjected to operation, eight were relieved by taxis, but only five altogether were saved by the two methods of treatment. Dr. Hasselwander, of Hausham, in Bavaria, records in the *Aerztliches Intelligenzblatt* a successful case of operation for strangulated obturator hernia. The patient, a country woman, aged sixty-five, had suffered for three days from colicky pains, constipation, and flatulence. On two occasions she had been seized with vomiting. Her appetite was bad, and she felt pain in the left foot. When first examined, her face showed an anxious expression, her tongue was furred, her body emaciated, and her urine was highly albuminous. The abdomen was distended with flatus. No hernia could at first be detected. There were itching sensations in the left thigh, and numbness in the entire extremity. On closer examination, the depression, plainly marked on the right side, over the adductor longus in Scarpa's triangle, was almost effaced on the left, where the same region was painful on pressure. On deep palpation, an indistinctly circumscribed hard smooth swelling was found on the inner side of the femoral vessels, over the adductor longus. On vaginal examination, fulness could be detected within the left side of the pelvis. Partial reduction was effected; but the symptoms became very serious a few days later, so that an operation at length had to be performed. The adductor longus was laid bare by an incision extending from below the pubes for three inches along the line of its outer border. That muscle was then cleared of the cellular tissue lying in its anterior aspect, and drawn inwards. The fibres of the middle part of the pectineus were divided, and a well-circumscribed swelling was in this manner exposed. The existence of hernia being now certain, the entire incision was enlarged, upon which very troublesome venous hemorrhage occurred, and it proved difficult to control throughout the remainder of the operation. The external pudic arteries were drawn aside. The swelling was about the size of a pigeon's egg, and very tense; but it fluctuated slightly on pressure. Its surface was of a purple color. Some strong adhesions were separated by the finger. By the aid of blunt instruments used with great precaution, the sac of the hernia was opened; its outer layer was aponeurotic; its inner coat consisted of a thick œdematous tissue, easily lacerated. There was no fluid in the sac, and the intestine lay immediately against its inner wall. On widening the incision in the sac by laceration till it became of a sufficient width, the intestine was found to be deeply congested and very tense. The finger was then passed into the neck of the sac, very sharply constricted by the border of the obturator foramen and the ligamentous tissue in the neighborhood of that region. Incisions were made in the inner and lower borders of the neck of the sac, by means of a straight probe-pointed bistoury. The intestine was then carefully replaced. Only the end of the little finger could be passed into the foramen. The venous hemorrhage, the depth of the incision, and the lateness of the hour at which the operation was performed, apparently without the aid of any artificial illumination, made the operation very difficult The wound was covered with an antiseptic plug. The patient passed a motion in the night, and was henceforth relieved from all intestinal troubles, though convalescence was prolonged through suppuration of the wound, the result of the damage done to the cellular tissue in Scarpa's triangle, and its extensive infiltration with venous blood. The patient, at the end of six weeks, was completely restored to health.—*British Med. Journal*, June 30, 1883.

FLOATING KIDNEYS.—DR. F. DURET has recently written a pamphlet on the diagnosis of floating kidney. The usual symptoms of floating kidney are pain in the flank, loin, or umbilical region, sometimes radiating and simulating renal or hepatic colic; or a sense of weight, sometimes even of pulsation, so that the condition is often the foundation of hysteria or hypochondriasis. Added to this, in many instances, there are digestive troubles, as flatulent dyspepsia and diarrhœa. The detection of the mobile tumor in the loin clears up many obscure cases; but Dr. Duret does not think the physical signs of resonance in the loin with a manifest depression of that region as mentioned by most writers are necessarily present. He divides the cases in which doubts have occurred as to diagnosis into three groups. In the one group, there is no appreciable tumor, but the symptoms are marked; and such cases have been mistaken for colic—renal, hepatic, and other—for neuralgia, lumbago, and even peritonitis, whilst hysteria has been a frequent diagnosis. In another group, where the signs are more evident, malignant tumors have been diagnosed. In a third, where the tumor is unmistakable, cases have been confounded with cancer of the liver, distended gall-bladder, even cancer of the stomach, splenic, uterine, and ovarian tumors—one case being actually subjected to ovariotomy. Dr. Duret's conclusions are that "renal ectopia" is comparatively rather common; its presumed rarity depending on the fact that it is so often overlooked. Therefore the possibility of its presence should be always borne in mind, and in cases of doubt no radical measures should be undertaken, on the ground that *primo non nocere*.—*Lancet*, June 30, 1883.

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INFANT FOODS.

In the paper by Prof. Leeds, which appears in this issue, we have presented some new and valuable data in regard to the chemical composition and physiological characteristics of certain infant foods. When we consider the high rate of mortality of infants, due directly or indirectly to improper alimentation, we can hardly fail to appreciate the importance of right views in regard to the composition and functions of the so-called "infant foods." This subject is, also, not without its commercial side. The preparation and sale of various kinds of aliment suited to the infant stomach has grown into a business of no small dimensions. The profits must be large if we may base an opinion on the lavish advertisement of these foods. The rivalry is keen, as any one may learn who will give even a casual inspection of the trade literature, or hear the statements of commercial travellers, or merely note the number of those employed to distribute samples of their unrivalled preparations. When the business is in active hands, and the competition close, prices fall to the lowest margin, and then, it has been said, ingenious methods of sophistication are employed to increase the profits. In a matter of such vital importance to the growth and development of the population the State should interpose, and the purity and quality of these infant foods should be made to conform to a proper standard. The work of Prof. Leeds is a timely contribution to our knowledge of the subject.

In the consideration of infant foods, the first to be taken up is human milk. This is, at the same time, the model and standard by which all other infant foods must be judged, and it is that which is most happily contrived to subserve the purposes of the growing organism. A very great variability in the composition of this fluid, in respect to its albuminoids and fat, and constancy in the quantity of its milk-sugar, are the characteristics on which Prof. Leeds places much stress. Surely he draws too sharp a distinction between the functions of the albuminoids and the carbo-hydrates. The view that the so-called heat-producing element — the sugar of milk—serves no other purpose, is now not held, since the conclusive experiments of Fick and Wislicenus, in their famous ascent of the Faulhorn. That by the oxidation of this substance force is evolved to be applied as muscular, nerve, or other force, and that it contributes to the growth and nutrition of certain tissues, are facts not now disputed.

Again, the albuminoids, although important as tissue-formers, are not so restricted in their office, but furnish force and heat to some extent. The classification of Liebig, whereby foods are arranged into tissue-forming and heat-producing, is much too restricted, and can be accepted only when thus limited.

Prof. Leeds undoubtedly expresses a fundamental truth when he says that "the problem of artificial infant feeding is to be found in the substitution of cow for human milk." The problem is solved of course when, by artificial means, the composition of the two fluids can be made to correspond. Hitherto, the devices employed to effect this have not been entirely successful. The milk of the cow, like human milk, varies greatly in the quantity of albuminoids and fats, whilst the sugar is a nearly constant quantity. Mere dilution with water serves to equalize the proportion of albuminoids; but the chief characteristic of the casein of the cow's milk —its solidity and impermeability to the gastric juice of the infant's stomach—is not readily overcome. The various artificial foods for infants serve—according to Prof. Leeds—the purpose of "attenuating" the casein clot, besides themselves contributing to nutrition. In various combinations of cow's milk food, attempts are made to be rid of this hard and indigestible casein. One of the most successful of these, in our experience, is a mixture of barley water and cream, sweetened with sugar of milk, and rendered a little alkaline by the addition of bicarbonate of sodium; and this we find is approved by Prof. Leeds from the theoretical standpoint.

The most interesting part of the lecture under consideration, and not less important than interesting, is the discussion of the various preparations intended for infant food. Our author divides them into two classes: farinaceous; Liebig's—so named because made in accordance with Liebig's original directions, but variously modified. As the lecture in its entirety is before the reader, we need not stop to comment on these individual preparations. There are, however, certain general principles, in regard to which it may be desirable to have some discussion.

It can now hardly be disputed that starch kills the infants of our day in numbers. Prof. Leeds does not, therefore, state the fact too strongly when he affirms that the results of chemical as of physiological research are alike opposed to the use of preparations containing much starch. But the law formulated after so much observation and investigation is not without exceptions. It is undeniable that now and then infants are found to grow luxuriantly on food consisting for the most part of starch. The explanation of this apparent paradox is to be found in the undeveloped state of the salivary and pancreatic secretions in the first months of life. But it appears from the interesting observations of Dr. Keating, at a late meeting of the College of Physicians, that some infants are precocious, so to speak, in the development of the glands furnishing these secretions. Whether or not this is the final explanation why many infants die on a diet of starchy food, and a few thrive on the same, remains for further investigations to determine.

We recommend to our readers a careful study of Prof. Leeds' analytical examination of the various foods now so persistently urged on the attention of the medical profession. Are they all or less than they pretend to be? Are they adapted to serve the purpose of infant foods? If they consist of the ingredients alleged, and are produced according to methods published by their originators, it is clear that they differ so much amongst themselves in composition and mode of preparation that, although intended for the same purpose, they are not equally adapted to its accomplishment. An infant food must then be selected, not because it bears the name of this or that manufacturer, but with reference to the physiological and pathological condition of the infant requiring it.

DIPHTHERIA IN GERMANY—ITS CAUSE AND TREATMENT.

An interesting discussion of this important subject has recently taken place at the Second Congress of German Physicians, sitting at Wiesbaden, April 13–16. It was participated in by Profs. Gerhardt, of Würzburg, Klebs, of Zürich, Heubner, of Leipsic, Jürgensen, of Tübingen, Rossbach, of Jena, Leube, of Erlangen, Edlefsen, of Kiel, Lictheim, of Bern, and others.

To the doctrine of the contagiousness and parasitic origin of diphtheria, there appeared to be no dissenting voice. There was rather a disposition to refine and elaborate the parasitic theory, so as to ascribe different forms of diphtheria to different varieties of fungus, such having been described by different observers in various instances, both micrococci and bacillus forms having been observed. To this view inclined the reporter, Prof. Gerhardt, and the co-reporter, Prof. Klebs. The latter referred to an epidemic he had encountered in Prague, of fulminating cases, with severe general symptoms, and especially hemorrhagic exudation into the central organs of the nervous system. In the false membrane of these cases were closely packed micrococci (spherobacteria). In another epidemic in Zürich the micro-organisms were bacilli composed of very short and narrow rods. In the latter epidemic the symptoms were very much less serious, the spleen was less enlarged, there was slight or no involvement of the kidneys, no defects of the liver and heart, and paralytic symptoms were less frequent. The children died, in fatal cases, from extension of the process into the bronchi, or inflammatory alterations in the lungs.

Edlefsen, on the other hand, claimed that in Kiel, where the bacillus form of diphtheria was more common, there was no essential difference in the course of the two forms, and that in the bacillus form, if death did not occur early in consequence of laryngeal obstruction, paralyses were frequent enough. The heart affections, in his experience, in diphtheria, did not consist always in parenchymatous degeneration, but rather in a paralysis of the nervous apparatus of the heart. This seems to us a happy suggestion of Edlefsen, accounting, as it does rationally, for those cases of sudden death in apparent convalescence from diphtheria, which have been rather loosely ascribed to heart-clot.

Gerhardt contrasted diphtheria with other infectious diseases in which, usually, the constitutional symptoms appear first, and the local manifestations later. In diphtheria, this order is reversed, although here also the fever is divisible into two periods—first that due to the local affection, which, in the lighter forms, may be the only febrile movement, to which in severe cases is added the peculiar diphtheritic fever. Gerhardt is inclined to consider as diphtheritic those slighter degrees of local involvement which we have been in the habit of regarding as follicular inflammations of such intensity as to produce circumscribed sloughs. Not only this, but Gerhardt believes we may have diphtheria without any membrane or local manifestation whatever. This, he says, is almost always of a chronic character. Klebs also speaks of chronic diphtheria, in which, after apparent recovery, intestinal symptoms appear, with enlargement of Peyer's patches, presenting the reticular appearance of the first stage of typhoid fever. Klebs also refers to a case, rapidly fatal, where the local lesion was not larger than a penny. These last are facts in connection with diphtheria which we do not recollect to have seen noted, and we especially call the attention of our readers to them.

As to therapeutics, the views advanced were quite as various as those we are in the habit of meeting at home. Thus Gerhardt discards all methods which tend to produce irritation, and thus to favor the spreading of the fungus. He observes two indications—first, the loosening of the membrane, and second, the combating of the cause of the disease. The first is favored by inhalations of steam, lime-water, lactic acid, and the action of pilocarpin. He confirms also the statement of Rossbach as to the efficiency of papayotin as a solvent or loosening remedy. The second indication is fulfilled by measures which are essentially antiseptic—viz., the use of peroxide of hydrogen, eucalyptol, iodized phenol, chloral hydrate, benzoate of sodium, hydrochloric acid, sulphite of sodium, boracic acid, corrosive sublimate, hydrofluoric acid, oil of turpentine, etc.

Gerhardt also emphasizes greatly the necessity of what he terms etiological therapeutics and rational prophylaxis—hygienic measures of a personal and general character.

Heubner holds that the local treatment of diphtheria is of comparatively little importance, and that we must combat the poison by internal remedies; Jürgensen, that care should be taken to keep the throat cleansed, but that no caustic measures should be employed. To attempt to disinfect the body would be vain, and we do better to rely upon supporting measures, and to avoid all debilitating agents.

Rossbach considers the tonsils the usual portals of entrance for the diphtheritic fungus, and he therefore, as a measure of prophylaxis, extirpates these glands if enlarged, or applies the galvano-cautery if they are small; after this, he observes no more infection. He characterized papayotin not as an anti-diphtheritic, but as a solvent for the membrane, and calls attention to an inferior preparation which in course of time loses its active properties.

Leube always applies to the throat in the beginning of the attack, and as thoroughly as possible, a mixture of equal parts of alcohol and carbolic acid. In this Gerhardt concurred, since, he says, in the beginning diphtheria is a local disease.

EXTIRPATION OF THE THYROID GLAND.

Up to 1850, there were 70 excisions of the thyroid, with a mortality of 41 per cent.; up to 1877, 146, with a mortality of 21 per cent.; up to 1883, 240, with a mortality of 11 per cent., or, in general terms, four times as many operations and one-fourth of the earlier mortality. In this country, goitre so severe as to require extirpation of the thyroid, is rare, and the comparatively large experience of the late Dr. W. W. Greene, of Portland, was for us almost phenomenal. But, as we would naturally expect, the continental and especially the Swiss surgeons, have such exceptional advantages in the study and operative treatment of these generally formidable tumors that their statistics seem equally astonishing and successful.

At the Twelfth Congress of German Surgeons, no less than four papers were presented on this subject by Kocher, of Bern, who published, some time since, in the Swiss *Correspondenzblatt*, fifty-eight cases, and now adds forty-three more, by Bardeleben of Berlin, by Wölfler of Vienna, who reported sixty-eight excisions by Billroth, and by Maas, of Würzburg.

In the evolution of the operation, two of the chief dangers—hemorrhage and septicæmia—have been, to a large extent, overcome, the latter by antiseptic treatment, and the former by a methodical ligation of all the thyroid arteries and their branches, and also of all the larger veins whose position is generally pretty well defined. The recurrent nerve must, of course, be sought and avoided. So large a proportion as seven cases in Billroth's sixty-eight suffered with tetanus, of whom two died, four recovered, and one suffered a relapse after three years. Kocher lost one-fourth of the malignant cases in his last forty-three operations, but only 5.1 per cent. in the non-malignant cases. That tracheotomy is to be avoided, even in cases of severe dyspnœa, seemed to be the general opinion, as it interfered with thorough antisepsis and the restoration of the form of the compressed and not seldom softened trachea. Kocher, when the disease is unilateral, frequently extirpates only the diseased half of the gland with good results, whereas Wölfler advocates total extirpation.

GALVANO-CAUSTY IN OPHTHALMIC SURGERY.

Battesti, in his *Thèse de Paris* for 1882, gives an account of the results obtained from galvano-caustic treatment in certain ophthalmic diseases, as carried out at de Wecker's clinic. His experience demonstrates the superiority of galvano-causty over every other method of igneous cauterization. The special advantages are, it causes but little pain, and the application is not followed by any decided reaction; the effect is limited to the point of application; it rapidly diminishes the pain of ulceration of the cornea, and it stimulates the development of the new formative materials.

The special conditions in which this practice has been utilized are as follows:

In detachment of the retina galvanic puncture gives very encouraging results. The same practice, frequently repeated, seems to be a perfect substitute for enucleation of staphylomatous eyes. It may therefore be used in simple hernia of the iris, in ciliary blepharitis, in granulations of the conjunctiva, and may supplant all cutting instruments for the most part, in the removal of tumors of the conjunctiva and eyelids.

At de Wecker's clinic, also, they have used galvano-caustic treatment with great success in pannus of the cornea, in simple ulcers, in rodent ulcers, but strangely enough, it has not been successful in serpiginous ulceration with hypopyon, in which, indeed, the method of Saemisch with antiseptic dressings, is preferable.

THE LATEST DODGE.

IN the July number of *The Manhattan* appears an article entitled "The Question of Medical Ethics." In lengthy, but most vigorous sentences, the writer, a well-known and respected physician of New York City, undertakes to make the matter plain to the general public. It does not seem to occur to him that any intelligent reader will suspect him of making an *ex-parte* statement, but with admirable composure, and most cool assumption, he goes on to place the subject "in its true light" before the very public who, as he says, "from necessity, are not and cannot be conversant with the merits of the controversy."

To such confessedly incompetent judges are the advocates of the New Code willing to appeal. Truly their cause must be in a desperate plight, when such measures are resorted to. There was a time when physicians, as members of a dignified and honored fraternity, did not think it well to parade their differences in the columns of daily papers, or in the pages of new magazines; but under the inspiriting influence of the New Code all this is to be abolished, and the laundry work of the profession is hereafter to be done in public.

We sincerely trust there will be no attempt made to meet the New-Code men upon their selected stamping ground. No good can come from pointing out to the public the gross unfairness, the ludicrous one-sidedness of such ebullitions of wrath as that which appears in the July *Manhattan*.

Did we desire to go into the merits of this article at this time we should find it no hard task to prove the charge of unfairness which must lie against it. But such is not our purpose at present, we desire simply to direct attention to the fact that one of the legitimate results of the New Code is to be the practice of appealing to the laity to judge of professional differences.

The writer in *The Manhattan* says the Code of Ethics of the American Medical Association, and of every State society excepting that of New York, tends "to make the old physician a bully, the young one a hypocrite." It certainly does not encourage such fouling of its own nest, nor prohibit its adherents from being honest men, or gentlemen.

THE MEDICAL DEPARTMENT OF SHAW UNIVERSITY.

WE have recently received the catalogue of Shaw University, at Raleigh, N. C., and a copy of the *African Expositor*, an excellent paper published in its interests.

Eighteen years ago, Rev. H. M. Tupper, its President, founded the University for the colored race. In spite of apparently insurmountable obstacles—political, personal, pecuniary, and social—his persistent courage, tact, and force of character have made it an eminent success, so that the property alone is valued at over $100,000, and last year a medical department was added to its already wide curriculum. For this the State gave ample ground, and friends have supplied the necessary funds for the erection of two large brick buildings for the new department. One contains the usual lecture-rooms, laboratories, dissecting rooms, etc., and the other is a dormitory with accommodations for sixty students. The fees for a five months' course of lectures are sixty dollars, and a graded course of three years is recommended, but two will be accepted for the present.

The principle of self-help is applied as far as possible, and many of the students have supported themselves by manual labor. Indeed, they have made a large part of the furniture and all of the bricks in the five buildings, and have sold, for the benefit of the school, over 3,000,000 more. Room-rent, lights, fuel, and board cost only eight dollars per month.

We have noticed this institution at some length, because we believe it is doing wonderfully good work for the colored people of this country. They need physicians of their own race, and this medical school will not only provide them, but will also open a new avenue of self-support to the black man. The whole number of students in the University is 347, of whom 11 are medical students.

IT seems that in New York a certain valued citizen, named Okenberg, was at the point of death, and the doctor, evidently a man of a sanguinary mood, declared that to save his life transfusion was the only remedy. A negro named Banks thereupon offered him q. s., and, most fortunately, in spite, too, of this shocking mechanical miscegenation, Okenberg got well. He alleges that he paid Banks privately, and also paid again for his services in the hotel bill. But Banks—his name is evidently and appropriately financial in its origin, and not riparian—was not thus to be put off. He is now suing the patient for $250 as an equivalent,—$192 for eight ounces of blood of 240 drops to the ounce, at ten cents a drop, the remainder being for his services.

It is a nice question this, the price per drop. If poor Banks' blood be worth ten cents, how much would Vanderbilt's or Jay Gould's be worth?

SOCIETY PROCEEDINGS.

THE PATHOLOGICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Thursday Evening, May 24, 1883.

THE PRESIDENT, JAMES TYSON, M.D., IN THE CHAIR.

CARCINOMA OF THE COLON AND STOMACH, WITH CARDIAC LESIONS.

DR. J. T. ESKRIDGE presented the specimens, with the following history:

Peter L., aged 60 years, Irishman, by occupation a dyer, was said to have enjoyed fair health until two years ago, when he suffered from a severe attack of inflammatory rheumatism. He knew but little of his family history, and could not give the cause of his parents' death. He never complained of heart disease. During the latter part of the year 1881, about eighteen months before his death, he first began to complain of pain in the epigastric region, attended by eructations of a sour, slimy liquid. Soon he experienced a sense of nausea coming on an hour or more after eating. About three months after the first appearance of symptoms of gastric disease, he began to vomit. At first vomiting occurred occasionally, but soon it took place several times a week, and finally once or twice each day. He lost flesh rapidly.

In the early part of March, 1883, he was admitted into the wards of the St. Mary's Hospital, when he came under my observation for the first time. He was very weak and greatly emaciated. His pulse—of the Corrigan type—was 80 per minute. When resting in the recumbent posture his breathing was quiet. Temperature was usually one degree below normal. The radial and temporal arteries were rather hard, and the latter were tortuous. A diastolic murmur and a systolic murmur were heard at the aortic orifice. The impulse of the heart was not very strong, and the left ventricle did not appear to be greatly enlarged. The lungs were emphysematous, and an area of impaired resonance, amounting to almost dulness, was discovered on each side of the spinal column, opposite the spines of the scapula. An indurated mass, apparently about the size of a walnut, more or less movable, was felt in the epigastric region to the right of the median line, and about midway between the ribs and the umbilicus. The growth was not sensitive to rather rough manipulation, and he had not experienced any pain for a number of months. His bowels were sluggish, and it required active agents to evacuate them. No tumor beside the one connected with the stomach was felt or suspected in any other portion of the abdomen. He vomited almost daily. The liver and spleen were not enlarged. The urine was free from albumen.

By securing daily evacuations from the bowels, and giving him nutritious, easily assimilated food, the vomiting nearly ceased. He improved, and left the hospital the latter part of March. Early in April, he was admitted to the Jefferson Medical College Hospital, where he came under my care the first of May. At that time he was eating but little, the abdomen was considerably distended by gas, and his bowels required repeated large enemata, or enormous doses of purgatives to secure their action. On the fourth of the present month, he experienced great pain in the right iliac region and just to the right of the median line of the abdomen, midway between the pubes and umbilicus. Over and around the latter painful spot—a circumscribed, highly tympanitic and sensitive area, about the size of a man's fist, was observed. Circumscribed peritonitis was diagnosed. Large doses of morphia, administered hypodermically, were required to relieve pain. The stomach became irritable, and the peritonitis more general. He died during the afternoon of the eighth of May.

Sectio cadaveris four hours after death, by the pathologist of the hospital, Dr. Morris Longstreth.

Thorax.—About seven ounces of perfectly clear serum was found in the pericardium. No evidence of pericarditis existed. Left side of heart firmly contracted; right side relaxed and contained considerable fluid blood. Right side of heart and its valves normal; no lesion found at mitral orifice. Free borders of the leaflets of the aortic valve are thickened and slightly contracted, allowing regurgitation to take place at the aortic orifice. Aorta atheromatous, dilated, and decidedly roughened near the aortic orifice. Left ventricle slightly hypertrophied.

Lungs deeply pigmented, and generally emphysematous; both congested posteriorily; surfaces of both apices covered with patches of fibroid thickening. Abundant evidence of diffuse peri-bronchitis chronica was present. Bronchial tubes of the lower lobes of both lungs much dilated. Bronchial glands at the root of the lungs very much enlarged.

Abdomen.—On opening the abdominal cavity, considerable very offensive gas escaped from the upper part. On the right of the median line of the abdomen, from the umbilicus downward, the abdominal wall anteriorly was adherent to omentum and intestine over an area of about five inches in diameter. Lower third of abdominal cavity was filled with a yellowish-white cloudy liquid. Intestines bound together by numerous adhesions. The stomach, which I show you, is small, and its coats are thickened. The hypertrophy of the wall of the stomach is slight at the cardiac end, but gradually increasing, becomes considerable at pyloric. The wall of the pylorus and adjacent portions of the stomach and small bowel is about one-half inch thick. At this point the mucous surface presents several fungous-looking outgrowths. The small bowel, with the exception of about half an inch of the upper portion of the duodenum, appears normal. In the colon, about six inches from the ileo-cæcal valve, is a stenosis, barely admitting the end of my little finger. The wall of the colon at the point of narrowing, which extends three or four inches of the length of the bowel, is greatly hypertrophied, measuring about one-third of an inch in thickness. The colon, from its beginning to point of constriction, is dilated into a large pouch measuring four and one-half inches in diameter. The dilated portion of the bowel presented a dark gangrenous appearance, distended by gas, was adherent to the anterior wall of the abdomen, just to the right of the median line. The remaining portion of the large bowel appeared to be healthy. No enlargement of the mesenteric glands was observed. Liver, spleen, and pancreas were small and firm, but free from malignant growths. Both kidneys were reduced in size, contained a few small cysts, their cortical substance was lessened, and their capsules were abnormally adherent in places.

Remarks.—It is worthy of remark that although considerable thickening and induration existed at the pyloric end of the stomach, the orifice remained sufficiently patulous to allow the food to come in contact with the intestinal juices. Another point of interest is seen in the existence of so great amount of narrowing in the calibre of the large bowel with no symptoms, except easily obviated constipation, until a short time before the man's death. It seems to me remarkable that a bowel so dilated above the point of a narrow constriction should be able to respond painlessly to purgatives.

MITRAL STENOSIS AND REGURGITATION FOLLOWED BY TRICUSPID REGURGITATION AND GENERAL DROPSY.

Dr. J. T. Eskridge presented the specimens, with the following history.

Ellen D., 48 years old, single, servant, was born in Ireland. Her mother died from some chest trouble when about forty years of age. Her mother's relatives were subject to "pleurisies and rheumatism." Her father lived to an advanced age. Ellen enjoyed good health until six years ago, when she suffered from three attacks of rheumatism within a few months. During each attack she was lame in the feet and legs. After those rheumatic seizures, she was comparatively comfortable until the early part of the year 1879, when she noticed that going up and down stairs, or prolonged or active exercise, exhausted her more than usually, and gave rise to palpitation of the heart. In the year 1880, she had another slight attack of rheumatism. She said her feet were almost constantly swollen during the years 1881 and 1882. Last summer her general health improved, but when the cold weather of the following fall and winter set in, increasing dropsy and dyspnœa returned. She was admitted into the wards of the St. Mary's Hospital, December 5, 1882, suffering greatly from general cardiaç dropsy and associate symptoms. One month later it was noted, that she temporarily improved after her admission, but the dropsy recurred and she failed rapidly.

January 10, 1883, her condition was observed to be as follows: She was jaundiced, irritable, and morose. She dozed frequently, her mind seemed clouded, but she was very restless. The tongue was heavily coated, breath had an offensive urinous odor, stomach was irritable, and anorexia almost complete. The urine was diminished in quantity, and contained abundance of albumen. Effusion existed in each pleural cavity, slight in the right, but the left side was filled up to the lower angle of the scapula. The pericardium contained an increased quantity of liquid. The lungs were congested, and numerous moist bronchial râles were present. Arterial pulsation was seen only in the carotids. Visible venous pulsations were very pronounced in the veins of the neck, and in one or two superficial veins on the anterior surface of the chest. After emptying the veins and exerting pressure upon them, they were observed to fill from the cardiac side and again pulsate while the finger was still firmly held against the vessels. A wavy impulse extending over a large area was seen. The cardiac pulsation was most marked just below the lower end of the sternum.

The pulse was very irregular and difficult to count, being about 120 per minute; it was intermittent, and irregular in volume and frequency. The variations of the pulse were most prominent when the hands were raised above the head. The impulse of the heart was felt over a large portion of the anterior surface of the chest. The area of the cardiac pulsation was bounded on the left by a point in the fourth intercostal space external to the left nipple; on the right by a point one inch internal to the right nipple; below by a point two inches below the sternal notch, and above by the left second intercostal space. Hepatic venous pulsation was very distinct. Percussion dulness was increased most on the right side. The pulmonary and aortic valves were apparently free from disease. A presystolic murmur, whose seat of intensity was over the left fifth costal cartilage, was heard over the anterior surface of the chest from nipple to nipple, and in the left axilla. It was difficult to determine whether the murmur was audible posteriorly, as the bronchial and crepitant râles and rapid breathing were confusing. Four or five days later, the presystolic murmur ceased to be audible. At that time general anasarca was well pronounced. January 24, she went into a semi-conscious condition, which gradually deepened into coma. She died January 26. She expectorated considerable blood and frothy mucous during the last month of her illness.

Sectio cadaveris twenty-four hours after death. Body well frozen. Considerable adipose tissue still remained. Thoracic and abdominal cavities only examined.

Thorax.—Left pleural cavity almost completely filled with a thin, straw-colored, serous fluid. Right pleural sac nearly half full of a similar effusion. There were no pleural adhesions. The left lung was crowded into a small space and congested; the lower lobe sank in water. The right lung was being encroached upon by the effusion, and its lower lobe was consolidated; the upper emphysematous.

The pericardium contained about six ounces of fluid similar to that found in the pleural cavities. No adhesions or patches of fibrinous exudation were seen on the surface of the heart. The cavities of the heart were relaxed and filled with dark fluid blood. The right auricle is greatly dilated. The tricuspid orifice admits the ends of the thumb and all the fingers of one hand up to the distal joint. The right ventricle is dilated and its wall is thickened. The tricuspid valve is insufficient. The valves at the pulmonary and aortic orifices are thin but competent; these orifices are not constricted. The wall of the left ventricle seemed to be thickened, and the ventricle is slightly dilated. The left auricle is greatly dilated. The curtains of the mitral valve are adherent to each other near their attached borders, and constrict the orifice, which they are no longer able to close, into a round opening only large enough to admit the end of the index finger.

Abdominal Cavity.—The bloodvessels of the stomach and bowels distended. The mucous membrane softened. Liver, heavy, dark, and grated under the knife. Spleen, enlarged, congested, and denser than normal. Pancreas, healthy. Both kidneys were congested, slightly cirrhotic, but contained considerable functionating tissue. General dropsy is rare in cases of mitral stenosis, except, as in the present instance, where it is combined with mitral insufficiency. No thrill was present during my attendance, which extended over a period of four weeks immediately preceding her death. The mitral presystolic murmur ceased to be audible during the last two weeks of her life. The absence of the presystolic murmur in cases of extreme stenosis of the mitral orifice, late in the disease, when the heart is weak and is acting rapidly and irregularly, has led some observers to believe that the murmur is frequently absent throughout the course of this form of valvular lesion. To this point I directed special attention in a recent paper on the "Diagnosis, Prognosis, and

Treatment of Mitral Stenosis," read at the last meeting of the Pennsylvania State Medical Society.

CONGENITAL MALFORMATION OF THE HEART WITH CYANOSIS; DEATH AT THE AGE OF TWENTY-NINE YEARS, FROM PULMONARY TUBERCULOSIS.

Dr. J. T. Eskridge gave a detailed account of the above case. The patient, a man, twenty-nine years old, had never been strong and able to run and play like other boys without suffering from severe palpitation of the heart. So far as the man could remember, he did not become blue before his twelfth year. After the occurrence of cyanosis his breath became much worse. He had rarely experienced pain in the region of the heart. One year ago, he first observed pains shooting through the upper portion of the right side of the chest. These continued and at times were severe, being sharp and lancinating in character. From the first appearance of the pains he began to lose flesh and strength. About the time of the beginning of the chest pains, a dry, hacking cough commenced, but expectoration was not profuse until a few weeks before he first saw him, when he took a heavy cold, which was followed by high fever, great prostration, and profuse night-sweats. He was admitted to the St. Mary's Hospital, January 2, 1883. The surface of his body presented a dusky hue, and his face, neck, hands, and feet (especially the fingers and toes) were quite blue. When he sat up, the blue color of the mucous surface of lips deepened into dark purple. The distal phalanges of the fingers and toes were hypertrophied, and the small superficial veins of the face, fingers, and various other portions of the body were easily seen and counted. The upper lobe of the right lung was consolidated and contained a cavity; the lower lobes were partially infiltrated. In the left lung the lower lobe was solid, and the upper was being infiltrated. Over the left lung, pleuritic friction râles were numerous. No venous pulsation was discovered. A presystolic thrill was felt in the third and fourth intercostal spaces to the left of the sternum, and was barely appreciable in the third intercostal space at the right border of the sternum. Percussion dulness was increased laterally. The cardiac impulse was felt and seen in the fourth intercostal space external to the left nipple.

A systolic and a presystolic murmur with their seats of intensity near the left fourth costo-sternal articulation were heard. The systolic murmur was audible anteriorly over a large area, and posteriorly at the lower angle of the left scapula. Anteriorly the systolic murmur was heard as low as the seventh rib on each side the sternum, faintly just below the left clavicle, but it was lost just below the right clavicle. The systolic murmur was audible in the left axillary region, but not in the right. The presystolic murmur was limited to a small area. The next three days the temperature varied from 100° to 102.5°. On the 6th, he coughed up several mouthfuls of blood unmixed with mucus. From the 7th to 11th, there was profuse expectoration of purulent matter containing small quantities of blood. Breath was very offensive, and the apex of the right lung was breaking down rapidly. Diarrhœa was rebellious and exhausting. He died suddenly on the morning of the 12th.

Post-mortem examination was made about four hours after death. The lungs were infiltrated by tubercle. The left pleural cavity had been obliterated by general pleuritic adhesion, the right contained about three pints of sero-sanguinolent fluid.

Heart.—Numerous pleuro-pericardial adhesions were present. The pericardium was not inflamed on its internal surface, and was nowhere adherent to the heart, but it contained about two ounces of a straw-colored, serous fluid. The heart was anæmic, flabby, and dilated. Its cavities contained a small quantity of fluid blood. No heart clot had formed. The right auricle, including its appendix, was enormously dilated. The right auricular wall was somewhat thickened. Across this auricle a thin, membranous strip stretches from right to left and from above downward. Its attachment above was at the upper portion of the auricle to the right of the appendix, below at the left margin of the tricuspid orifice. The imperfect septum, he thought, had been an attempt by nature to divide the auricle into two nearly equal compartments. The inter-auricular septum was imperfect, the foramen ovale being sufficiently patulous to admit the passage of his thumb from the right auricle into the left. The right auriculo-ventricular orifice was enlarged and admitted the ends of the thumb and all the fingers of one hand. The right ventricle was dilated to nearly twice its normal size. Its wall was not much thickened. A patch of fibroid induration, one inch long by half an inch wide, was seen on its endocardial surface. The anterior and posterior segments of the tricuspid valve were united and formed one large leaflet. The left segment was so situated that it could not have aided materially in closing the auriculo-ventricular orifice. The greater portion of the imperfect segment was stretched across the ventricle near the apex of the heart, and more or less obstructed the current of blood from the ventricle into the pulmonary artery. Free regurgitation at the tricuspid orifice was permitted on account of the large size of the orifice and the imperfect condition of the valve. The other valves of the heart were thin but competent. None of the orifices of the heart were constricted. The left cavities of the heart were rather small. The pulmonary artery was smaller than normal.

No special disease besides a fatty condition of the liver was seen in the abdominal organs.

In his remarks on the case, Dr. Eskridge said that the membranous strip which extended across the right auricle vibrated with the auricular current of blood, and probably had given rise to a presystolic murmur. If the blood in struggling through the patulous foramen ovale had given rise to a murmur, it also would have been presystolic in time. He stated that the presystolic murmur in the case was well defined and easily distinguished from the systolic one, and thought it was unfortunate for the science of physical diagnosis that both these conditions existed in the same heart. He knew no means by which one would be able to attribute the presystolic murmur to one or both of them, since it was not positive whether an inter-auricular current was capable of developing a presystolic murmur. He desired that the heart should be referred to a committee of three for a fuller report on the congenital malformation.

Dr. Nancrede referred to the development of the heart as explaining such variations, etc. It was referred to a special committee for examination.

Dr. J. T. Eskridge presented the specimens from a

CASE OF EXTREME MITRAL STENOSIS, DEATH RESULTING IN A FEW MONTHS FROM SEQUENTIAL LESIONS WITHOUT GENERAL DROPSY,

with the following history. Charlie, æt. fifteen years, died in St. Mary's Hospital during the latter part of December, 1882. In February of that year, during my term of service, he first came to the hospital, suffering from acute bronchitis. The attack ran its course in a week or two, but the heart, during and after the seizure was exceedingly irritable, frequently beating from 120 to 150 times per minute. Infrequently he complained of pain over the præcordial region. The heart was repeatedly and carefully examined, but no endocardial murmur or pericardial friction-sound was heard. No thrill or friction fremitus was felt. He was kept in the recumbent posture, and counter-irritants were applied to the præcordium. At the end of about two weeks, he left the hospital feeling tolerably well, although the cardiac pulsations were rarely below 100 per minute, and a little exercise or excitement of any kind, would increase them to 120 or more.

In August, 1882, he reëntered the hospital, and was again suffering from acute bronchitis, with free secretion attended by numerous subcrepitant and large moist bronchial râles. After the subsidence of that attack, which took place in about a week, a decidedly rough and rather long presystolic murmur was heard. During the remainder of his life he stayed in the hospital, and was engaged most of the time in waiting upon the sick in the ward. Ascending and descending stairs, and active exercise of any kind, greatly exhausted him, causing the heart to beat tumultuously, and he to pant for breath. He rapidly grew worse, and by the latter part of November, he was spitting quantities of blood rather frequently. The lungs soon became so engorged that the frequent hæmoptysis did not relieve them. During most of December, he remained in bed propped up by pillows. The last two weeks of his life, he was air-hungry, and gasped for breath. His extremities were cool and cyanosed, his face was of a dusky hue, and he expectorated large quantities of blood and frothy mucus. No general dropsy existed. Considerable albumen was found in the urine. Physical signs of pulmonary congestion and œdema, bronchitis, pleurisy with effusion, pleuro-pericarditis, and pericarditis with effusion in the pericardium, were present during the last few weeks of his life.

Sectio Cadaveris.—Numerous recent and old pleuritic adhesions were found, especially in the neighborhood of the heart. Pleuræ were slightly adherent to the upper portion of the pericardium by means of recent exudation. Considerable fluid, containing only a trace of lymph, and no pus, was seen in the pleural sacs. The pericardium contained several ounces of nearly clear serum. Several patches of recently exuded lymph were present on the outer surfaces of the ventricles. The weight and size of the heart were greatly increased. The right cavities of the heart were relaxed and filled with dark fluid blood and a chicken-fat clot. The left side of the heart was less relaxed, and contained a smaller quantity of blood. The wall of the right ventricle is nearly twice its usual thickness; its cavity is slightly enlarged. The right auricle is dilated. The valvular curtains at the pulmonary orifice appear competent, and show no inflammatory deposits. Tricuspid valve slightly incompetent, otherwise normal. The left auricle, with its appendix, is enormously dilated. The left ventricle is concentrically hypertrophied. The aortic valve curtains are somewhat thickened, but they are competent, and do not encroach upon the orifice. The mitral curtains are adherent to each other along their entire right borders, and along the external portion of their left free margins, thus leaving a space only four millimetres long by two wide for the blood to pass through. The valve has a leathery feel, but neither it nor the surface of the auricle is rough. The mitral valve does not present the funnel-shaped appearance usually seen in such cases, because, probably, the curtains had adhered to each other irregularly, and left the small opening to one side of the centre of the normal orifice. The lungs were dark, deeply congested, and more or less œdematous. Several ounces of clear serum were found in the peritoneal cavity. Liver, spleen, and kidneys dark and congested.

One point in the clinical history of this case is worthy of special attention. The first symptoms, directing attention to cardiac disease, were the rapid pulse and exceedingly irritable condition of the heart. These symptoms existed for several weeks, and probably for a few months, before a murmur was audible. An explanation of these, without the presence of a murmur, will be found by a careful study of the diseased mitral valve before us. Neither the valve nor the surface of the auricle is roughened, consequently, for the production of a presystolic murmur under such conditions, it is necessary for the blood-current to meet with sufficient resistance in its passage from the auricle into the ventricle to enable it to set up decided vibration in the valve itself. Before sufficient mechanical obstruction took place at this orifice, the parts being comparatively smooth, to develop a murmur, inflammation and beginning adhesions of the curtains to each other were taking place. The latter conditions, although not sufficient to give rise to a murmur, rendered the heart irritable. If the explanation given is the correct one, it points to the significance of some irritable hearts, where no murmur is present to announce cardiac valvular disease. The length of the murmur was greater than that of any mitral presystolic murmur that I had heard before. It seemed to be divided into two parts, both occurring between the diastole and systole of the heart. The first part was the softer, and had less intensity; the latter was very rough, and ended abruptly. They corresponded to what Hayden has described as the post-diastolic and presystolic murmur. He says they always denote great obstruction at the auriculo-ventricular orifice. The post-diastolic murmur, he thinks, is due to the passive flow of blood from the auricle into the ventricle, the presystolic taking place when the auricle contracts. If subsequent autopsies should almost constantly associate the prolonged or double presystolic murmur with great stenosis at the mitral orifice, it will be of value in prognosis, as life cannot long continue when stenosis is as great as seen in the heart I exhibit to-night.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

Stated Meeting, June 6, 1883.

The President, Alfred Stillé, M.D., in the Chair.

Dr. J. M. Keating made

SOME OBSERVATIONS ON THE SALIVARY DIGESTION OF STARCH BY INFANTS.

Recently, in a late English work, he said, I find the following: "During the first few months, farinaceous food of every kind should be avoided, for the child's stomach (?) cannot digest it. Until the third month, or even later, no saliva is secreted, and without this floury foods cannot be assimilated." (*Management of Infants, etc.*, by Howard Barrett.) This idea is so prevalent, and most of us have adopted the statement as representing the teaching of physiologists, that it has always been a matter of surprise to those interested in the feeding of infants to find occasionally, especially among the poorer classes, infants fed upon corn-starch or other farina, almost to the exclusion of other food, and thrive.

At present, we presume that amylaceous material has of necessity to be converted by hydration into glucose, and for this reason I will not detain you by indulging in the more speculative aspect of this subject, as to whether dextrine is capable of being absorbed, and which of the two ferments, that of the salivary glands or of the pancreas, is of the most importance.

We have left this matter for further investigation. Prof. Albert R. Leeds, in his very able *exposé* of the subject of foods as regards their chemical constituents, made the matter so clear, that in his table of the analyses we have evidently an accurate guide for the selection of food in individual cases. But as the general belief is that for infants of a tender age our choice should fall on that which contains a minimum quantity of starch and a maximum amount of vegetable albuminoids, or foods, based on the Liebig formula, I deemed it valuable to institute a series of experiments, the result of which I confess were rather surprising, to test the saliva of infants, and to satisfy myself that the reason why some infants apparently thrive on starchy food is not due to any change in the starch in its preparation, but depended upon contact with secretions well established in childhood.

In these tests we endeavored, as far as possible, to exclude all error. Corn-starch was used, it having been previously boiled, cooled into a paste, and portions of this were put into little linen bags, and given to infants to suck for two minutes at a time; Pavy's test was then used; the corn-starch paste exhibited before the experiment no evidence of sugar change.

The linen was thoroughly boiled without discoloration of the solution. The bags with their contents were in each case thrown into a test-tube, and I submit for your examination the accompanying report.

To the resident physicians of the Philadelphia Hospital, Drs. B. F. Hawley and A. E. Roussel, I am indebted for assistance in this matter, as many of these tests were repeated a number of times by them, and great care was used to insure accuracy. My report includes the results obtained by experiments with the saliva of twenty-one children—varying in age from six days to seventeen months. The sugar-change was noted in all but three—one of these was a babe six days old, whilst in another babe seven days old a marked reaction was observed. I feel satisfied that some infants do digest starch provided it is presented to them in a digestible form, and also that the salivary secretion which occurs earlier than we have been accustomed to believe, is allowed to come in contact with it, and I cannot but attribute the many statements to the effect that starchy food in small quantities is contraindicated, to the fact that the secretions of the mouth are less liable to exert their influence when such food is administered by bottle and deposited in a surprisingly short time in the acid juices of the stomach. If starchy food, such as barley flour, oatmeal, rice, wheat flour, etc., is indicated on account of its highly nutritious qualities which exist in all portions of the grain and deemed advisable in the feeding of children, our few observations teach us that they should be administered in such a way as to insure their thorough digestion, and I am satisfied that the surprising results we witness, especially among the poor, of thriving table-fed babes, is due to the mode of feeding more than to the fact that they are exceptional and astonishing cases. My table shows that the age of the infant is not a guide to the quality of its saliva, and we should bear this in mind when choosing the form of food. Thus, should we be called upon to regulate an infant's feeding, it would be important for us to test the saliva.

If we find a sugar change taking place, we might incorporate with milk small quantities of one of the cereals, either barley, oatmeal, or wheat. On the contrary, should the test prove negative, Horlick's or Mellin's food would be decidedly preferable. But, while thoroughly convinced that the saliva is a most important element in digestion, we cannot overlook the fact that starchy foods have also to run the gauntlet of the pancreas, which organ, if it possess in childhood relatively the same power that it does in latter years, is far more active than the salivary glands. We cannot, then, overlook the value of a microscopic examination of the stools of all bottle-fed children, for I believe that by this alone we can regulate the quantity of farinaceous food, detecting the proportion of the undigested residue.

The following are my conclusions:

The saliva of some infants possesses the property of converting starch into glucose, regardless of age.

The age of the infants cannot be taken as an indication of this property of its saliva.

When such a condition is found to exist, a small quantity of well-prepared farinaceous food is valuable as an element in the diet, incorporated with mixed cow's milk.

An examination of the stools of children so fed would be a guide as to the quantity of starchy food to be used, and when farinaceous food is employed, slow feeding is probably preferable to the bottle.

DR. N. A. RANDOLPH, Assistant Demonstrator of Physiology in the University of Pennsylvania, then read the following

NOTE ON THE FECES OF STARCH-FED INFANTS.

The series of experiments presented in the preceding paper by Dr. Keating seems to me to be in the highest degree suggestive, for it is only rational to suppose that the development of the amylolytic ferment of the pancreatic juice is coincident with the appearance of the analogous salivary ferment. Inasmuch, however, as the food even in spoon-fed infants is retained but a short time in the mouth, and further, as the continued action of the saliva after it enters the stomach is as yet problematical, the only absolute control for such observations is afforded by an examination of the feces.

Through the kindness of Dr. Keating I have been enabled to examine the stools of twenty-four starch-fed infants, of ages varying from forty-five days to eighteen months. Twenty-three of these children were fed upon cracker-dust, water, and condensed milk. The twenty-fourth received corn-starch boiled in milk.

The freshly evacuated feces of each infant were carefully bottled and labelled, and a drop of a solution of iodine was added to a small portion of each specimen, which was then submitted to microscopical examination. Besides turning the starch blue, and indicating the presence of dextrine by a peculiar mahogany-red color, the iodine has the advantage of rendering any fats which may be present much more readily apparent. The reaction of each specimen was taken, but though this varied from acid to alkaline and neutral, no correlation between the reactions and the other properties of the specimens could be observed. A decoction of each was tested for glucose with freshly prepared Fehling's solution, but except in one instance no appreciable amount could be found.

The presence of *starch* was exceptional and apparently in no degree dependent upon the age of the child. The stools of eighteen out of the twenty-four children contained either no starch, or but a trace, *i. e.*, no more than is frequent in the evacuations of a healthy adult upon a mixed diet. Six of these specimens were from children of three months or less—the youngest being but forty-five days old. In many cases the broken and empty cellulose envelopes of the starch granules were clearly discernible.

The six infants in whose evacuations a noteworthy amount of starch was present, were aged respectively three, four, ten, thirteen, fourteen, and seventeen months. The eldest two were in very bad health.

The following is a tabular statement of the age, diet, and appearances of the feces in the children forming the subjects of this study.

An Examination of the Feces of Twenty-four Starch-fed Infants.

No.	Age	Food	Starch present.	Remarks.
1	[illegible]	Condensed milk and cracker dust.	None.	
2	[illegible]	"	Traces.	
3	[illegible] "	"	"	
4	3 "	"	"	Twice examined; no fat before inunction, about 10 per cent. after.
5	3 "	"	"	
6	3 "	"	About ¼ starch.	
7	3 "	"	Traces.	
8	4 "	Corn starch and milk.	"	
9	4 "	Condensed milk and cracker dust.	None.	Many broken cellulose envelopes.
10	4+ "	"	Traces.	Evidences of potato surreptitiously given.
11	5 "	"	About ½ starch.	
12	5+ "	"	None.	
13	5+ "	"	"	Many bacteria.
14	6+ "	"	"	10 per cent. fat; had had inunctions.
15	8+ "	Breast and cracker food.	Traces.	
16	10+ "	Condensed milk and cracker dust.	More than normal.	Many bacteria; evidence of potato surreptitiously given.
17	13— "	"	20 to 30 per ct.	Some glucose present, and indications of dextrine; saliva was found to be inefficient.
18	14— "	"	Traces.	
19	14 "	"	"	
20	14 "	"	10 p. ct. starch	Sick.
21	14+ "	"	None.	Except a few large cells containing starch from potato.
22	17— "	"	"	
23	17— "	"	Over ¾ starch.	Syphilitic; saliva was found to be inefficient.
24	18	"	Traces.	Indications of dextrine.

The facts presented appear to justify the following conclusions:

First, that *many* infants of under three months can digest starchy foods.

Second, that the individual variations in this regard are so numerous that no broad and general statement can be made as to the period at which infants *begin* to digest starches; and

Third, that the physician can be absolutely certain that a farinaceous ingredient in the diet of a young infant is beneficial only by an examination of the dejecta under such diet.

After the reading of the preceding paper,

DR. KEATING spoke of one case in which fat was found in the feces—cod-liver oil had been administered in the form of inunctions, and the child fed alone on Borden's condensed milk.

DR. RANDOLPH replied that he had found 10 per cent. of fat in the feces of a child which was receiving two inunctions of cod-liver oil daily. He was now conducting some experiments upon this subject, and intended to report the results to the College in a communication to be read at a future day.

CORRESPONDENCE.

THE PROPHYLACTIC TREATMENT OF DIPHTHERIA.

To the Editor of THE MEDICAL NEWS.

SIR: In THE MEDICAL NEWS of June 30th, Dr. F. P. Porcher recommends a prophylactic treatment for diphtheria, which I fully endorse.

On the 21st of July, 1879, I was called to a case of diphtheria, which was the first of over one hundred cases of the disease which occurred during an epidemic in this vicinity.

The type proved to be very malignant, seven cases were fatal, and died within eighteen hours of the first noticeable symptoms; one as early as six hours; five were left completely paralyzed; four of the five recovered; one died from strangulation while eating.

The treatment used, was tr. mur. iron, chlo. potash, and quinine, given very freely with a liberal allowance of milk punch and eggnogg.

The disease proving very malignant, I put the children in the infected district on the above medicines as a prophylactic. In the houses where the disease proved malignant, I gave it every three hours. Among those who were taking the medicine, but one case of the disease developed, and that case was taken sick within twenty-four hours after the first dose of medicine was given.

In the infected houses where the children were taking the prophylactic, there were twenty-five cases among the adults, who were taking nothing to prevent the disease. If the medicine did not protect the children, why did they escape and the adults take the disease?

Yours respectfully,
J. L. NAPIER, M.D.

NEWS ITEMS.

NEW YORK.

(*From our Special Correspondent.*)

SANITARY INSPECTION OF TENEMENT HOUSES.—On July 9, the Board of Health appointed fifty physicians, who, as temporary assistant sanitary inspectors, are to form the summer corps for the purpose of visiting the tenement houses of the city, and treating any sick children that may be found in them. The city has been divided into fifty districts, and each inspector, during his service of two months, was instructed to visit each house at least twice during that time. Prescriptions, which are advised to be as simple as possible, will, in case the parents are too poor to pay for them, be filled at the Dispensary of the Health Department. Where it is deemed advisable, tickets will be given for the Floating Hospital and the Seaside Nursery. Printed directions regarding the care of infants and on sunstroke are also to be distributed. Dirty houses and streets are to be reported to the Board. The salary is $100 a month.

THE RESIGNATION OF DR. DALTON.—Dr. John C. Dalton, the well-known physiologist, has resigned his position as Professor of Physiology at the College of Physicians and Surgeons which he held for so many years. He will be succeeded by Dr. John G. Curtis, who, for several years past, has been the adjunct professor. Dr. Dalton's resignation is very generally regretted.

WASHINGTON.

(*From our Special Correspondent.*)

THE UNITED STATES AGRICULTURAL DEPARTMENT AND THE STUDY OF THE GERM THEORY OF DISEASE.—The Agricultural Department has availed itself of the services of Dr. D. V. Salmon, D.V.M., and has established an experimental farm of seven acres—lying on the eastern outskirts of Washington—with facilities for the proper study of the pathological appearances in the diseases of fowls, swine, and cattle, and for the study of inoculation as a preventive of contagious fevers. Dr. Salmon will be assisted by Dr. Rose, who will reside on the farm and devote himself to the treatment and clinical care-taking and make the post-mortems, while Dr. Salmon, at the Agricultural Department proper, will pursue his investigations in the microscopical appearances in the blood of these diseases, and the cultivation of the virus—its attenuation and use in inoculation. Dr. Salmon has already made marked advances in this direction and published such results in our journals (*The American Monthly Microscopical Journal*, April, May, 1881, July, 1882), and in his reports to the Commissioner of Agriculture—as to call forth high praise from those who have followed his investigations. Dr. Sternberg considers that if his work had been done anywhere else than in America, it would doubtless have attracted more attention, both at home and abroad.

Dr. Salmon began his investigations of inoculation in the summer of 1880, and selected fowl cholera. He extracted the blood directly from the heart, using all the means possible to avoid the introduction of foreign germs, and cultivated the germs found in a broth made from the flesh of fowls, which was filtered until limpid, and then sterilized by heat. He gives this process at some length in his published reports. His fluid is an infusion of muscle at the temperature of 160° F., and for three hours boiled, filtered, and neutralized in caustic soda, and his sterilizing apparatus he thinks well adapted to its purpose. Test-tubes are prepared against contamination, half filled with the cultivating fluid; the blood introduced, tightly corked with rubber, which is provided with a bent ventilating tube, tightly packed with cotton, and placed in a vessel containing three or four inches of water that can be tightly covered; this is boiled three or four times, at intervals of a few hours. He makes the positive assertion that prolonged boiling is necessary to proper sterilization. His experiments with a steaming apparatus have not proved satisfactory. He alternates his views by successive dilutions, and considers that his process facilitates exactness in the amount employed, in rapidity of preparation, and in the preservation of the virus for as long a period as possible.

The inoculation is done with a grooved lancet, puncturing between the skin and the muscles of the wing. He found decided evidences of individual susceptibility; thus, one bird died after inoculation with a high dilution of 1 to 40,000, while another resisted a drachm of the pure virus. After these inoculations, there were local lesions, with rise of temperature; but on their restoration to health, they were tested with strong virus, and placed in infected runs with sick birds, but resisted all contagion. Eighty birds had been so inoculated with success at the date of writing.

The virus itself he gives as a form of micrococci, readily obtained by a fresh solution of aniline violet, prepared in strong alcohol, 1 grain to ʒij of aq. dest., and used at once; and he objects to Klein's apparatus as subject to varying temperatures, which varying temperatures result in the appearing of a different organism, as was admitted by Wood and Formad in cultivating diphtheritic virus, his cemented cell with a thin cover not being sufficient for proper sterilization, and the fluid—the aqueous humor of a rabbit's eye—was not sterilized. The virus is not diffusible through the air, but appears in the excrement, is taken in through the alimentary canal, and the germs are not preserved in the earth as long as six months. In charbon the virus is retained for years by the earth.

He accounts for the failure to discover the bacillus anthracis in the blood, in cases of charbon, after inoculation, as being due to the fact that the virus takes time to work its way from the lymphatics of the skin through the glands to the blood, and that consequently death may occur from chemical poisoning before the bacilli have reached the blood in any appreciable quantity, but that even then they may be cultivated from this blood. His answer to Bert's experiments, of having destroyed the bacilli with compressed oxygen and alcohol, and still found a virulent fluid, from a formless ferment, is that there were live spores remaining which could be cultivated into bacilli. He attaches much importance to Chauveau's success in inoculating with diluted charbon virus on sheep, and to Pench's similar experiments with sheeppox.

In the swine plague Dr. Salmon, contrary to the observations of Klein, gets no bacilli, but does get many micrococci, which, when cultivated and inoculated, resulted in an eruption and elevated temperature. He concludes, therefore, that the reason Klein did not obtain more positive results was that he did not obtain the germ, and calls attention to the fact that Klein did find micrococci and not bacilli in the tissues of the affected animals. Pasteur gave this same view in 1882, but Salmon is quoted as having so expressed himself in the *Agricultural Report* for 1880.

Such experiments as these, made by a department of our Government, bring its operations directly in the range of the intelligent medical practitioner.

DR. JOHN A. OCTERLONY has been recently elected Professor of Obstetrics and Diseases of Women and Children in the University of Louisville, in place of Dr. Theophilus Parvin, recently elected to the Chair of Midwifery in Jefferson Medical College.

THE PRESIDENT OF THE ONTARIO MEDICAL ASSOCIATION.—At the annual meeting of this Association held in June last, Dr. Daniel Clark was elected *President*, and not "Dr. W. Clark," as by mistake stated in our issue of June 23d.

THE ST. LOUIS MEDICAL SOCIETY AND THE CODE OF ETHICS.—In reference to the preamble and resolutions offered by Dr. Pollak at the late meeting of the American Medical Association, the St. Louis Medical Society has adopted the following resolution:

That the St. Louis Medical Society distinctly repudiates the statements contained in said preamble and again expresses its fealty to the existing Code of Ethics as a time-honored and most suitable fundamental law of the profession, and specially depreciate any action calculated to reflect upon its loyalty to those principles which have heretofore secured immunity from the machinations of schismatics within or enemies without.

The Michigan State Board of Health.—The regular quarterly meeting of the Michigan State Board of Health was held at Lansing, July 10, 1883. The Secretary read his report of work during the last quarter, which showed that a successful sanitary convention had been carried on at Reed City, and arrangements had been made for a convention at Muskegon, August 23d and 24th; that considerable correspondence had been had concerning the examination of plans for proposed buildings at various State institutions; that the report for 1882 had been distributed to various societies, libraries, etc.; that the weekly bulletin of health in Michigan had been regularly prepared and issued; that returns of the names and addresses of about 1200 health officers had been received and filed; that a circular relative to the danger to be anticipated from smallpox, and one relative to the reporting of contagious diseases with appropriate blanks, had been devised and distributed to all local boards of health; that the article entitled "Diseases in Michigan in 1882," had been compiled; that the accumulated letters of the office for the years 1873 to 1881 had been arranged and bound; that the compilation of the articles on "Meteorology in Michigan in 1882," and on "Weekly Reports of Diseases in 1882," was well in hand; that circular 55, relative to the work of health officers, had been revised to conform to the new legislation of 1883, and, if approved by the Board, was ready for publication. The Secretary read a *résumé* of the recent work of other State Boards of Health.

The Board then proceeded to examine plans for proposed public buildings, under the law which requires all plans for State buildings to be submitted to the State Board of Charities, and to the State Board of Health. Plans were examined in detail as follows: For wings to the present school for the blind, at Lansing; for a proposed hospital at the Michigan Asylum for the Insane, at Kalamazoo; for a cottage hospital for the State Public School, at Coldwater; and for a main building for the State Industrial School for Girls, at Adrian, and made record of propositions which were approved, and several recommendations.

On motion of Dr. Lyster, the State Board's Committee on Buildings, including ventilation, etc., was requested to prepare a report on the best plans and methods of construction of hospitals suitable for the various State institutions.

Gastrostomy.—Mr. J. Greig Smith reports a case of gastrostomy for malignant stricture of the œsophagus, the patient also having a hydatid cyst of the liver.—*Bristol Medico-Chirurg. Journal*, July, 1883.

The Grocer's Company Prize.—The Court now announces as the subject for competition for the prize of £1000 the following problem: "To discover a method by which the Vaccine Contagium may be cultivated apart from the animal body, in some medium or media not otherwise zymotic; the method to be such that the Contagium may by means of it be multiplied to an indefinite extent in successive generations, and that the product after any number of such generations shall (so far as can within the time be tested) prove itself of identical potency with standard Vaccine Lymph." The prize is open to universal competition, British and foreign. Competitors for the prize must submit their respective treatises on or before the 31st of December, 1886; and the award will be made as soon afterwards as the circumstances of the competition shall permit, not later than the month of May, 1887. In relation to the Discovery-Prize, as in relation to other parts of the Company's scheme in aid of sanitary science, the Court acts with the advice of a scientific committee, which at present consists of the following members: John Simon, C.B., F.R.S., John Tyndall, F.R.S., John Burdon Sanderson, M.D., F.R.S., and George Buchanan, M.D., F.R.S. All communications on the subject as to conditions, etc., are to be addressed to the Clerk of the Grocer's Company, Grocer's Hall, London, E.C.—*Edinburgh Med. Journ.*, July, 1883.

Dr. Spina, assistant in Professor Stricker's laboratory, at Vienna, who has recently been prominently before the profession in opposition to Koch's theory of the bacillus tuberculosis, has been nominated Professor of General and Experimental Pathology at the University of Prague.

Health in Michigan.—Reports to the State Board of Health for the week ending July 7, 1883, indicate that intermittent fever, cholera infantum, remittent fever, diarrhœa, dysentery, and bronchitis have increased; and that inflammation of bowels has decreased in area of prevalence.

Including reports by regular observers and by others, diphtheria and scarlet fever were each reported present during the week ending July 7, and since, at 10 places; and measles at 15 places. The last case of smallpox (in Kalamazoo Township) was reported dismissed July 7.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JULY 9 TO JULY 16, 1883.

Baily, E. I., *Colonel and Surgeon.*—In addition to his present duties, to take charge of the Office of Medical Director, Military Division of the Pacific, during the absence of the Medical Director.—*Par. 2, S. O. 64, Military Division of the Pacific, June* 30, 1883.

Campbell, John, *Lieutenant-Colonel and Surgeon, Medical Director, Department of the South.*—Leave of absence on Surgeon's certificate of disability, granted by S. O. 50, Department of the South, May 21, 1883, extended one month, on Surgeon's certificate of disability, with permission to leave the Department of the South.—*Par. 7, S. O. 156, A. G. O., July* 9, 1883.

Magruder, D. L., *Lieutenant-Colonel and Surgeon, Medical Director, Headquarters Department of the Missouri.*—Granted leave of absence for one month, with permission to apply for an extension of one month.—*S. O. 145, Department of the Missouri, July* 12, 1883.

Sutherland, C., *Colonel and Surgeon, Medical Director, Military Division of the Pacific.*—Granted leave of absence for one month, with permission to apply to the Adjutant-General of the Army for extension of two months.—*Par. 1, S. O. 64, Military Division of the Pacific, June* 30, 1883.

Perley, Harry O., *Captain and Assistant Surgeon.*—Assigned to duty at Fort Pembina, D. T.—*Par. 1, S. O. 118, Department of Dakota. July* 5, 1883.

The Medical News *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the News *should be addressed to No. 1004 Walnut Street, Philadelphia.*

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. XLIII. SATURDAY, JULY 28, 1883. NO. 4.

ORIGINAL LECTURES.

EXSECTION OF THE HIP-JOINT.

A Clinical Lecture delivered at Bellevue Hospital Medical College.

BY LEWIS A. SAYRE, M.D.

(Specially reported for the MEDICAL NEWS by
EDWARD DEVELIN, M.D.)

GENTLEMEN: This man, M. M. D., æt. 37 years, was brought to my office a few hours ago by Dr. Barnes, of Binghamton, N. Y., who gave me the following history: Both parents and family are healthy. Patient was strong and robust until two years ago, and has been living on a farm; while ploughing, he has been in the habit of kicking the mud off the plough, and by this means the hip-joint has been injured, which has resulted in inflammation, and at the present time it has reached the stage of suppuration, with exfoliation of bone.

The patient has been wearing this long hip-splint, which is of the pattern of the first splint I devised, and which I have since condemned. Here you will observe that instead of the pelvis belt completely encircling the pelvis, it passes round but one-third of a circle, and to this is attached one perineal band, which passes under the perineum upon the side of the diseased limb; by this means the perineal band is brought more towards the diseased joint, instead of passing directly up over the pubes, as in my improved splint; by the bands passing directly up over the pubes, it lessens the liability to strangulation of the circulation, and at the same time the weight of the body passes down directly in the centre. All the instruments I have made for the past ten years are made with a complete pelvis belt, with two perineal bands. It is well for you to remember that the perineal bands pass directly up in front of the pubes, but posteriorly they are wide apart, coming across the glutei muscles; the great difficulty being that the instrument-maker will place them widely apart anteriorly, in spite of all instructions that I have given to the contrary. It is very essential that the bands be near together in front for the reason that has been already stated.

As soon as I have discovered an improvement in the construction of any of my instruments, I denounce the instrument previously made. I do not blame any gentleman living away from the cities, and who perhaps is unable to secure information upon this point as easily as those living in a large city; it is the instrument-maker who is at fault, as it his special calling to make instruments according to the most improved plan, and he should certainly know better than to offer for sale those that have been condemned.

As we continue our examination, you will observe that the right limb is two inches shorter than the left, although the limb is perfectly straight owing to Dr. Barnes' careful method of applying the extension. You will observe that there is one sinus in the groin, one below the crest of the ilium, one above the trochanter major, and another about three inches below; we have in all, four sinuses, and judging by appearances, they lead to dead bone; this you may know by their peculiar characteristic appearance, which is graphically described as representing the anus of a chicken. This dead bone is a source of irritation, and keeps up a constant discharge from the body, emptying itself by way of these sinuses. As time goes on, granulation commences around the borders of these orifices, and becoming exuberant, is recognized as proud flesh; in this case you will observe it presents this appearance.

Whenever you find an opening of this description in such a case as is here before you, you may be certain that such an opening leads to dead bone; you may be positive upon this point. In probing these sinuses, a flexible probe should be used in order that it may follow the channel without injuring the tissues; never use any force while probing at the seat of disease. The question here is what to do in this case; nature herself is trying to exsect the hip-joint; if the patient does not succumb from the long process of suppuration, we often get remarkable results from nature's treatment; in fact, there are some gentlemen to-day who claim that this is better than surgical treatment; I must confess that I differ from that doctrine.

Here now is dead bone, and there is no hope for that man to get well until that bone is removed; now in the slow process of nature to remove that dead bone, there is a long travelling of pus through various roads which it must make for its exit; at the same time more or less of that pus will be absorbed by the system, resulting in anæmia and exhaustion. The patient informs me that while the sinuses are open and there is a free discharge of pus, he feels much better and his general health improves; this is because the poison of the broken-down tissue is not absorbed by the system, but when the openings become closed as they are apt to do for a short time, there is no escape for the pus, and hence it is returned to the system, and as a natural result constitutional disturbance ensues, followed by loss of appetite, with febrile movement, etc. This process may go on until all the diseased tissues have been thrown off, if the man can outlive the disease, but this can hardly be called the rule.

The question now arises as to the advisability of complete exsection of the bone, and the application of a drainage-tube to the wound. My own experience is that where the disease has gone on to caries of the bone, and where you have relieved the parts from reflex action, and yet the inflammation still goes on to destructive caries, that notwithstanding your extension and proper adjustment of the parts to give the patient ease, and afford him the benefit of the open air for the improvement of his general health; that notwithstanding the drains are placed in such a manner as to give free outlet to the pus; if, I say, that in spite of all these precautions the carious degeneration still goes on, then your duty is promptly to remove the diseased tissues by an operation.

If, on the other hand, the caries diminishes and the discharge from the sinuses becomes gradually less, under your precautionary measures, then you should be satisfied with your expectant treatment.

In one case of hip-joint disease Dr. Spencer removed nine inches of the femur subperiosteally, and recovery commenced from the instant, which resulted in a shortening of the bone of only three inches, with a good movable joint.

In this case by making pressure into the joint severe pain is induced, but there is a total absence of pain immediately that extension is applied.

I am very glad to find that this limb is dressed in a proper manner, extension being made from the thigh and not from the leg alone. To illustrate this point in regard to the proper mode of extension, I can do no better than relate an incident that occurred when visiting London for the first time: A child was brought to me suffering from hip disease and in much the same condition as this man, and upon whom extension had been applied *from below the knee;* I took the child in my arms, and laying the diseased limb over one of my arms in such a position as to immediately relieve the diseased surfaces from pressure, and upon the instant the expression of the child's face turned from that of pain, to relief and contentment. When I removed the strips of adhesive plaster from the leg, one of the gentlemen present checked me, and stated that they had been following out the method of extension by making traction below the knee by the use of the adhesive plaster and roller bandage; I informed the gentlemen present that the treatment had been entirely wrong, and that instead of making traction upon the thigh, they had simply been making traction upon the ligaments of the knee-joint.

At this point Mr. Berkley Hill arose and said: "Gentlemen, I desire to explain to you why we have had such bad results from treating disease of the hip-joint according to the American plan. You must all remember the number of diseased knee-joints we have had following the treatment of the disease of the hip-joint; we have produced disease of the knee-joint by our constant traction upon the ligaments of this joint, and have thus complicated the disease already existing as just described by Dr. Sayre. I think it most remarkable that we should not have thought of it, and I thank you, Dr. Sayre, for coming here to tell us of our mistake."

A more straightforward acknowledgment of an error I have never seen. At a future time I will present this patient before you, and state the treatment required in this case.

(The patient again before the class at the following clinic.)

We now propose to dilate these various sinuses and ascertain the precise condition of the bone, as to whether we shall perform the operation of exsection. Mr. Anthony White was the first one to perform this operation, in 1821; you will find a full account of the case in Cooper's *Surgical Dictionary*. Dr. Bigelow, of Boston, performed the operation in 1852, the patient dying twelve days after. I performed the first successful operation in this country in 1854. I had been called to see the child two years before; at that time I recommended removal of the bone. I explained to the father that the hip was full of diseased bone, and that the numerous sinuses from which pus was issuing strongly indicated the necessity of an operation. He therefore consented, and I arranged for the operation to take place upon the day following. Drs. Cheeseman, Rogers, and Hoffman were the three medical gentlemen called in consultation; they condemned the operation so violently that the father came to me, and the result was the operation was postponed. I did not hear from him again until two years after, when he called upon me and said that he had been unable to find one doctor who agreed with me, but inasmuch as the child was daily becoming more exhausted, he and his wife desired the operation to take place at once, to save the child, if possible, if I could find one medical gentleman who would agree with me as to the opration. I therefore notified Drs. Parker, Hoffman, Cheeseman, and the late Jas. R. Wood, to attend and see the operation, but not one of these gentlemen would go. The operation at that time was so unknown that hardly any one would risk his reputation by even being a witness to it. Dr. Drake, a retired physician, however, said he would like to see the operation, provided I would not hold him responsible. It proved a complete success in every way; the patient is now married and has a family; there is a little deformity with a shortening of half an inch, but there is quite considerable motion at the joint. When I reported that case and reported having motion I received a great deal of ridicule and censure. I then had the child taken down to Dr. Wood's office and there examined carefully, and proving the truth of my remarks. This, of course, stopped all further discussion upon that point.

In making your incision, it is very important to take a point midway between the anterior superior spinous process of the ilium and the trochanter major; that will bring you just over the top of the acetabulum; you then take a firm, strong knife, and plunge directly down until the knife touches the bone; then draw your knife down to the top of the trochanter major; then curve it inward, making your incision from four to eight inches, according to the extent of the bone diseased. You must be sure and make your incision *through* the periosteum. You then take a curved, probe-pointed bistoury, and make an incision through the periosteum only, at right angles to your previous incision, and at a line with the trochanter minor; then, with the periosteal elevator, peel up the periosteum from the diseased bone until you come to the digital fossa, where the rotator muscles of the thigh are inserted; here it may be necessary to use your knife, to carefully cut them off from the bone itself. After having peeled off the periosteum in this manner, the limb is to be adducted, and the diseased bone removed by a chain or small thumb-saw. If you find that you have reached healthy bone, your object is accomplished; but if, on the contrary, you find that there is yet diseased bone remaining below your section, it must be removed, perhaps necessitating a larger incision. It is, however, an absolute necessity that all dead bone be removed, to make the operation a success.

Sometimes by passing the finger into the rectum you can determine to a certain extent to what degree the caries of the acetabulum has progressed, and if the head of the bone be in its place. My assistant informs me that the internal periosteum points to great thickening of its substance. Here passing a probe into one of these sinuses, it passes in to the extent of eight inches, and I cannot say how much further it may go. Under these conditions, and discovering a large amount of pus and dead bone within the joint, exsection of the hip-joint has been determined upon.

The disease in this case being in the right thigh, it is necessary for me to stand on the left side of the patient. I shall make my incision connect these various sinuses, it being always advisable to follow this method when feasible. I therefore, as you observe, press the knife down at the point indicated, until I reach the bone, and I now make my curved incision. A broad curved spatula is now placed in either side of the wound, to hold it open; and upon further examination, we find the periosteum to be very much thickened. I now take this probe-pointed bistoury, and make my incision through the periosteum, half encircling the femur at a point below the trochanter minor, and then taking this periosteal elevator, I endeavor to peel off the periosteum; remember, it is very necessary to leave as much of the periosteum as possible; and now reaching the digital fossa, we divide the rotator muscles. Having peeled off the periosteum, I now take this small thumb-saw, and make my section below the trochanters, and with the aid of these lion-forceps withdraw the head, neck, and trochanters of the femur *en masse*. The acetabulum I find to be necrosed, and completely perforated to the internal periosteum, this, however, being intact.

Now although I have removed nearly five inches of this man's femur, I find that the bone is diseased still further down. I therefore peel off the periosteum still lower and my assistant pushing the shaft of the femur upward toward the wound, bringing the bone more fully into view and thus enabling me to remove the necrotic portion with greater facility, I find it necessary to remove another inch of the shaft in this case; this being done, I remove carefully as much as possible of the dead bone from the acetabulum and portion of the pubes which I find is also necrosed; the latter, however, is a somewhat difficult matter owing to the close proximity of the femoral artery to the diseased structures. The wound is now thoroughly washed out with a carbolized solution of a strength of one to forty.

The operation itself is very simple as you observe, but the after-treatment is extremely important, the whole secret of your success depends upon this. My assistant now carefully holds the diseased limb for fear of injuring the artery while the patient is placed in the wire cuirass, this being a wire cradle made to fit the patient with movable foot-pieces by which your extension can be maintained. I now fill the wound with Peruvian balsam, manipulating it in such a manner that it penetrates to all parts of the cavity in every possible direction. You now observe that I take this piece of oakum which is also saturated with the balsam, and carefully pack the wound in order to maintain the original shape of the periosteum, and thus as new bone is formed, it will be of serviceable thickness and strength. I now insert the drainage-tube, and put in a suture at the upper and lower portion of the wound, and endeavor to secure union of these portions of the incision by union by first intention.

You now observe that as the patient lies in the cuirass, the anus is directly over the opening posteriorly, thus allowing of free evacuations without soiling the instrument. The whole secret is to secure the sound limb as a means of counter-extension; first fastening the sound limb to the leg-piece with a roller bandage, commencing at the foot, and as you reach the knee, place a folded newspaper over it to prevent flexion; then passing your bandage around the thigh, and as you reach the perineum, bring your bandage from the perineum over the handle of the instrument at the side, by which means your counter-extension is secured.

Having now fastened the sound limb in this manner, we apply our extension straps of adhesive plaster to the diseased limb, making the extension from the thigh and never from the leg alone in these diseases of the hip-joint; these straps, you observe, are secured in the ordinary manner with the roller bandage; and the foot is now secured to the right foot-piece of the instrument, and by means of this screw at the bottom the requisite extension is made. Having effected this, we now fasten the limb to the instrument with a roller bandage, carefully padding the inequalities of the limb in order to obtain equable pressure at all points. I now moisten the wound with carbolized oil, and cover it with carbolized cotton and the usual antiseptic dressing; securing the whole with a broad roller.

This dressing can be left on for twenty-four, forty-eight, or sometimes ninety-six hours, or until such time as moisture shows itself upon the outside of it. You will also notice that I pass one or two turns of the roller over the abdomen, and thus secure perfect immobility of the parts.

The pulse and respiration of the patient are now good at the conclusion of the operation, although we have removed as large a quantity as six inches of his femur.

(Patient again before the class for the first time since the operation.)

It is now some four months since you saw this patient's hip-joint exsected, and I bring him here today to show you the result of the treatment before he leaves for his home, which he is desirous of doing tomorrow. During the intervening time since you last saw him, Dr. Keyes, in whose ward he was placed, found it necessary to make another incision, and remove further portions of necrosed bone to the extent of about another inch of the femur. At the time I performed the operation, I feared such might be the case, but as the periosteum was very thin, and firmly adherent to the shaft lower down, and the diseased portion was so extremely small in amount and in the centre of the shaft, I was in hopes Nature would have eliminated that portion without further necrosis. This fact shows how absolutely necessary it is to remove all necrosed bone when operating. There are, however, some cases in which this may, perhaps, be impossible.

We find that we now have a shortening of the limb to the extent of almost four inches. My impression is that, had the extension been properly adjusted, the shortening would not have been so great.

I now intend to apply the long hip splint, in order that the man can go out of doors and secure the benefit of the fresh air. You will notice that the sinuses are yet open, the lower ones discharging slightly, but the upper one has almost ceased, but a few drops of pus passing daily. The wound itself is entirely closed. Now having applied the long splint, I commence passive motion at the joint, in order that I may create a new joint. With the assistance of his crutches, the leg being maintained in the desired position by the proper application of the splint, he can now walk around and secure the benefit of the fresh air, in the mean time nourishing him well with a generous diet in order to build up his general constitution. The disease in time becoming entirely eradicated, the length of the right limb can be equalized by the application of the high shoe. [The man now with the aid of his crutches walked around the room, this being the first time he had been upon his feet since the operation.]

Note. — The patient left for his home the second day after appearing before the class at the last clinic, stating that he had no idea he could walk so well after remaining in bed for so long.

Letter from the attending physician, Dr. F. B. Brooks, received two weeks after the patient had returned home:

"Cincinnatus, N. Y.

"Dr. Lewis A. Sayre,

"Dear Sir: Since coming from New York Mr. D. has been under my care, and wishes me to write you as to his present condition. The hip is doing well, drainage perfect, and everything lovely except a slight tenderness at exit of one of the drainage-tubes. Any suggestions in regard to the case will be thankfully received. Yours truly,

"F. B. Brooks."

Extract from letter No. 2, received thirteen days later:

"Cincinnatus, N. Y.

"Lewis A. Sayre, M.D.,

"Dear Doctor: I wish to address another letter to you in regard to Mr. D. The hip is doing well with the exception of a local tenderness at exit of drainage-tube, and I find this is caused by fungous granulations. I have applied the nitrate of silver, as you directed in your letter, but as it was only yesterday I cannot yet state results.

"Otherwise he is doing well, gaining flesh, pulse regular and strong, appetite excellent, and skin good color. I would be glad to hear from you soon.

"Very truly, yours,

"F. B. Brooks."

On receipt of this first letter I advised the application of nitrate of silver to the edges of the wound, as I surmised that the slight tenderness spoken of was owing to excessive granulations. The second letter proved my suspicions to be correct; since the receipt of which I have received no further details in relation to the case from Dr. Brooks.

ORIGINAL ARTICLES.

RAPID CURE OF POPLITEAL ANEURISM BY THE USE OF THE ELASTIC BANDAGE. TWO CASES, WITH REMARKS.

BY J. T. BOUTELLE, M.D.,
OF HAMPTON, VA.

ABOUT the first of February, 1883, I was consulted by a mulatto, thirty-five years of age, for a painful tumor of the knee, which proved to be a large aneurism, filling the popliteal space, bulging on both sides, and pulsating strongly. Pulsation could be felt in Hunter's canal. He was decidedly averse to any cutting operation. While I was debating in my mind what method to pursue, I happened to meet Dr. H. M. Nash, of Norfolk, Va., who mentioned in conversation that he had produced a speedy and lasting cure in a similar case by applying the Esmarch bandage from the toes to the top of the thigh, so as to empty the aneurism by pressure, then, having compressed the femoral artery above, removing the bandage, allowing one pulsation to fill the sac with blood, and immediately stopping the artery again; afterward controlling the circulation by shot-bag pressure. I decided to try this plan, and did so; though, as will be seen, my method differed considerably from his in some of the details.

On February 8th, I proceeded as follows, assisted by Dr. J. H. Peek, of Hampton. No anæsthetic was used. The Esmarch elastic bandage was applied firmly from the toes to the head of the tibia. I then continued with one of Dr. Martin's elastic bandages—No. 1 A—winding it around the knee from the head of the tibia upward, stretching the bandage to its full extent, and proceeding very slowly, waiting a little after each turn. In this way I carried the bandage to the upper third of the thigh. After the bandage was applied, the size and shape of the tumor apparently remained the same. The pressure caused very severe pain in the knee, which the patient bore with firmness. After five minutes, I compressed the femoral artery in the groin while the bandage was removed: then the pressure was removed from the artery for one or two beats of the heart, and immediately reapplied. A faint pulsation was felt in the tumor as the arterial stream was let on. Digital pressure was kept up on the femoral artery for about fifteen minutes, then gradually slackened, and as no pulsation was felt in the aneurism, I allowed the full stream to flow through the artery. This caused no pulsation, the tumor remaining hard. A shot-bag of about ten pounds weight was suspended from the ceiling and lowered upon Scarpa's triangle; this was not sufficient to stop the circulation, but lessened its force considerably. About half an hour after the operation, severe pain came on in the ankle and shin, requiring a dose of morphine—one-half grain—for relief. The shot-bag pressure was maintained for two days, being occasionally removed for relief to the patient. Since the removal of the bandage, there has never been the slightest pulsation in the aneurism, nor any return of pain in the knee. The patient kept his bed for about ten days, and then began to walk about cautiously. In three weeks he was walking about town, and is now about to resume his occupation of cook. No œdema of foot or leg followed the operation, nor was any coldness of the limb noticed at any time. In fact, with the exception of the pain in the ankle after the removal of the bandage, which was soon relieved, he has had no inconvenience other than to keep his bed.

At my request, Dr. Nash has very kindly sent me an account of his case, which I will give in his own words:

"The case of popliteal aneurism referred to in conversation with yourself as having been successfully treated with Esmarch apparatus by myself, was that of Joseph Harris, aged about fifty years at the time of the operation—Aug. 1, 1879. The aneurismal tumor was about the size of an orange, and filled the whole popliteal space.

"On the date mentioned, the patient was etherized, and assisted by my friend, Dr. Richard Bagnall, the limb was enclosed from the toes to the middle of the thigh, and directly over the tumor, by the elastic bandage, and the tube tourniquet secured, when the rest of the bandage was removed, as is done when this apparatus is used for amputation. The tube was thus retained for nearly two hours, ether being kept up more or less all the time to cover the pain. The tube was then loosened, and the aneurismal tumor almost immediately filled with blood; and one pulsation was both seen and felt, when I at once made pressure with my thumb on the femoral above the tumor for a few minutes, after which time the tumor was, and remained, perfectly motionless, the blood which entered immediately after the removal of the tube tourniquet having coagulated. As a precaution, however, I thought it prudent to continue some pressure on the femoral for a day or two longer, which I did as well as possible under the circumstances by a bag of shot suspended from the tester of his bedstead, but which the patient's wife informed me was not kept constantly on the vessel, by reason of the pain the continuous pressure produced. Considerable œdema of the leg followed the obliteration of the vessel, which was treated by rest, warmth, and finally by a Martin's elastic bandage. The recovery was complete, and the patient has done duty as a porter since that time."

I find in THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES for April, 1881, an article by Lewis A. Stimson, M.D., on the treatment of aneurism by the elastic bandage, in which he has collected sixty-two cases, the majority being popliteal. In the number for July, 1882, of the same journal is a review of a pamphlet on the subject by A. Pearce Gould, M.S., F.R.C.S., in which the number of cases is reported as seventy-two. In these cases, although there were some differences of detail, the principle of the treatment was practically the same, viz., to maintain the sac full of blood in a stagnant condition for a considerable time until a coagulum formed. The elastic bandage was applied first to the leg below and then to the thigh above the aneurism, a tourniquet, Esmarch tubing, compressor or digital pressure being added and the apparatus kept in place for an hour or two hours completely cutting off the arterial flow. Great care was taken not to compress the aneurism. This does not appear to have been on account of possible danger from the compression, but on the theory that pressure would cause the clot to be smaller than the calibre of the sac and hence liable to be broken up when the blood stream began to flow against it. The success reported was variable, about one-half of the cases being cured. Two deaths occurred, one of which was not fairly attributable to the method pursued. In the cases of failure the patients seem to have been no worse than before the operation, and the performance of other operative measures was not precluded.

The two cases I have reported will be seen to differ radically in method and *rationale* from any of these, the chief point of difference lying in the application of the bandage to the aneurism itself. Dr. Nash completely empties the aneurism by pressure of the bandage, keeps it empty for a considerable time by the use of the Esmarch tubing, then lets on a full stream to fill the sac suddenly and arrests it, the explanation being that the blood rushing into the empty, flaccid sac, and stopping short will form a rapid and firm clot.

But my case differs essentially from his in method, and, I think, will be found to involve a quite different principle. I applied the full force of a Martin's elastic bandage over the aneurism, with the intention of squeezing out its contents, but I am confident that I did not succeed in this, for after the application of the bandage the tumor seemed scarcely at all lessened in size or altered in shape. The bandage remained in place only five minutes, no tourniquet was applied, the femoral artery was stopped by digital pressure not longer than fifteen minutes, after which time the full force of the arterial stream produced no pulsation, the tumor being hard and quiet. The shot-bag pressure was an intermittent one, and at its best only slowed the circulation slightly. I must therefore conclude that the actual pressure of the bandage upon the aneurism produced immediately a firm coagulation of its contents. If I am right in this conclusion, it is evident that the cure of popliteal aneurism by the elastic bandage becomes a much simpler matter than by the method hitherto pursued. Of course there may be danger of rupturing the aneurismal sac by too powerful pressure, but I do not think this danger will be very great if we proceed slowly with an ordinary elastic bandage, not attempting to empty the sac, but merely to compress it very firmly and evenly over its whole extent. Also by not maintaining the pressure of the bandage for a long time, and by doing away with the prolonged use of a tourniquet we greatly lessen the other dangers, congestion of internal organs from forcing back the blood from the limb for a considerable time, and œdema, and possibly gangrene, of the limb as a result of the continued use of the apparatus. I admit the weakness of reasoning from one case, but the gratifying result of this one, and the freedom from suffering on the part of the patient, will, I hope, induce those who have the opportunity, to give this method a trial.

HYSTERO-EPILEPSY IN A BOY TEN YEARS OF AGE.

By E. J. KEMPF, M.D.,
OF FERDINAND, INDIANA.

As hystero-epilepsy is an affection confined to adult or menstruating females, rarely occurring in females before puberty and after the menopause, and in males, it may not be without interest to report a case in a boy ten years of age, that lately came under my observation. I will endeavor to give an accurate and faithful description of the case, and venture a few remarks.

Mr. Peter G., the father of the boy, is of a strumous diathesis. Several of his brothers and sisters have died of phthisis, and he, though still free of any local manifestations of this diathesis, is weak and sickly. His wife comes from a healthy family, but is of a nervous and hysterical temperament. The patient, Frank G., is ten years old, and much too large for his age and correspondingly slim. His body was never strong, and is very much inclined to sickness—the image of his father in this respect. His mental qualities and his nervous system are like his mother's.

The boy has always been noted for his peevish and nervous disposition and his cowardice. His eyes were always restless and extremely watchful of everything. He would tell cunning lies to attain a certain end, and was noted for his hypocrisy. For these reasons he was never liked by his teachers or his comrades. At home, he was petted by both parents, as he was the first-born child and the only son. Such is the previous history.

Dr. Paul Kempf, the family physician, gives the following history:

January 2, 1883, I was called to see Frank G., ten years of age, who complained of an inability to walk, stand, or sit, and of slight pains in the limbs. Temperature and pulse are normal, bowels are constipated, no appetite, face is pale, and the body seems to be ill-nourished. Typhoid fever being prevalent at the time, I thought the symptoms to be prodromic of this disease. At my next visit, I found the patient in the same condition; no better, and no worse. Pressure along the spine, and in fact pressure anywhere, caused flinching and pain. In a few days, palpitation of the heart and noises in the ear appeared. The other symptoms remained the same, the pulse ranging from 70 to 80, and the temperature from 99° to 100° F. I gave him purgatives, and iron and quinine. But as the patient did not improve, and as I suspected some spinal trouble, I requested a consultation with Dr. W. R. McMahan. He coincided with my views, and gave it as his opinion that the case was one of commencing caries of the spine in the cervico dorsal region, the pain along the spine being sympathetic.

The treatment of iron and quinine was continued, with the addition of Horsford's Acid Phosphate. The bowels were continually constipated, and at one of my visits I removed a large quantity of hardened fecal matter from the rectum. After this, I ordered daily enemata of warm soapsuds, to prevent a re-accumulation of the feces.

About three weeks after the commencement of the sickness the patient began to constantly moan in a peculiar monotonous manner at all times except during sleep. The disease seemed to have changed its character, or was becoming more fully developed. Spasmodic contractions of the muscles of the abdomen also were noticed. A few days afterwards hallucinations and delirium set in, followed by convulsions, frothing at the mouth, peculiar cries, and tonic and clonic contractions of all the muscles. The convulsions with frothing at the mouth would first appear, to be followed by tonic contractions of the muscles of the arm, forearm, and face, and clonic contractions, in the form of opisthotonos, would close the performance. The whole attack would last twenty or thirty minutes. The patient was seemingly unconscious during the attack, but would often remark at the end: "Now I am done." From five to a dozen of these attacks would occur during the day, the patient being entirely free of them during the night. The presence of the clergyman or myself would restrain the patient from having an attack. For other and sympathizing visitors he would often, as if to accommodate them, go through with the whole performance.

By the request of Dr. Paul Kempf, I was at this time called in consultation, and I will give the further description of the case. I found the patient in bed seemingly perfectly helpless. His eyes had a peculiar glistening look, and were intensely restless. No motion, sign, or gesture of any person in the room escaped his attention. He would continually moan in a peculiar monotonous manner, stopping whenever remarks were made by some one present. If these remarks were concerning him, or if questions were put to him, he seemed for a short interval to forget to moan, but immediately noticing the omission he would recommence. The moaning seemed to be a part of the boy's make-up. On turning the patient around to try the effect of pressure along the spine, I noticed that the patient said, "it hurts," before I even touched him. On touching him either lightly or roughly over the spine or any part of the body the remark, "it hurts," was repeated. Lungs, heart, liver, spleen, stomach, and abdomen—except a slight tympanites—were normal. The body seemed tolerably well nourished, though the boy's appetite was almost nothing.

During an attack the limbs and the body become rigid, the hands and wrists twist in all shapes, and the muscles of the face are distorted. This is followed by clonic spasms, the body being opisthotonically arched, the head being thrown violently backwards and the body was violently thrown alternately on to the occiput and the heels. This stage lasted five or ten minutes. The parents and attendants would try to restrain and straighten the patient during these contractions, but their efforts being futile, they at last only endeavored to prevent the patient from hurting himself by falling off the bed, by twisting his neck, etc. Weights had also been applied to both limbs to restrain the spasmodic contractions.

We agreed that the patient was suffering from hysteria, complicated with epileptiform attacks. The patient was given the following:

℞.—Ammonium Bromide, . . ʒij.
Sodium Bromide, . . . ʒij.
Elixir Valerianate Ammonia, . f℥viij.—M.
Sig.—A tablespoonful four times a day.

The other treatment, tonics and enemata, as well as the milk diet were continued. The parents were enjoined not to sympathize in the least with the patient. All unnecessary and sympathizing visitors were to be kept out of the room. During the attacks the patient was to be severely let alone. He was to sit up in bed propped up with pillows, and gradually to be persuaded to sit up in a rocking-chair. Three days afterwards we again saw the case. He was sitting up in a rocking-chair, and for the first time for weeks was not moaning. He had only two slight attacks on the fourth day after commencing with the bromides. The treatment was continued, and instead of the enemata, the following was prescribed to regulate the bowels:

℞.—Syrup Lacto-phosphate of Lime, f℥ijss.
Soda Phosphate, . . . ʒj.—M.
Sig.—Two teaspoonfuls as required.

Within two weeks the patients was convalescent and able to walk about. He walks in a peculiar stoop-shouldered sneaking way, complains of occasional pains in the limbs, and often pretends pains, aches, and lameness. He therefore still needs watching and treatment. The mixture of the bromides will be given him for several months and repeated in the future whenever thought to be indicated.

The parents are instructed not to sympathize with any of the boy's suspicious complaints, and always to suspect him.

Comments.—Hystero-epilepsy is a disease affecting females of a hysterical type. It is a condition in which paroxysms occur, characterized by great intensity of the convulsive phenomena, combined with more or less marked features which recall the phenomena of epilepsy. The symptoms vary in different cases. The disease occurs generally in females during the menstruating period. Some cases were prostitutes, others had suffered extreme fright, and others had been victims of domestic tragedies. Cases are on record in which epilepsy was the first disease, hysteria being added after puberty. Other cases had hysterical aura first, soon followed by attacks of epilepsy. Although the disease is one of the menstruating female sex, cases have occurred before puberty and after the menopause. A case has been reported by M. Parisot (*Journ. de Méd. de Paris*, and THE MEDICAL NEWS, September 30, 1882) as occuring in a young man eighteen years of age.

The case herewith reported resembles what is termed hystero-epilepsy in the female. The hysterical aura preceding the epileptoid attacks for several weeks, consisted of pains in the limbs, back, neck, and other parts of the body; palpitation of the heart; the peculiar moaning; noises in the ear, hallucinations, and the contractions of the muscles of the abdomen. After three weeks followed the attacks of delirium and convulsions; of tonic contractions and distortions of the muscles of the face and limbs, accompanied by cries and frothing at the mouth, and lastly came the opisthotonic movements, or the clonic contractions. During the attacks, the patient was seemingly unconscious, though this condition may be termed "perverted or altered consciousness" (C. K. Mills, *Journal of Mental and Nervous Diseases*).

The most remarkable feature of the case is its rapid cure, the treatment being the bromides and moral force. But of course a return of the disease is probable at any time, and, knowing this, the patient will be strictly watched, and treated as soon as any symptoms of hysteria reappear.

MEDICAL PROGRESS.

The Treatment of Severe Catarrhal Cystitis by Cystotomy.—Dr. Horovitz, of Vienna (*Wiener med. Wochensch.*, Nos. 13 and 14), remarks on the changes that have taken place in respect to operations on the bladder. At one time lithotomy was the only operation for the removal of stone or foreign bodies from the bladder. Lithotrity has, to a great extent, replaced it in these cases, and cystotomy is now widening the range of its applicability. He then describes cases of cystitis, which resist all treatment, whether medicinal or instrumental, and which, unless boldly taken in hand, lead on to fatal nephritis and pyelitis.

The urine in these cases varies in color, from light yellow to dark red-brown, is alkaline in reaction, with ammoniacal or fetid smell, of high specific gravity, with thick slimy deposit of mucus, pus, blood-corpuscles, epithelial cells, with crystals of triple phosphates and urate of ammonia, and large quantities of bacteria. In cases in which the kidneys are already involved, casts are to be found. The patient suffers extremely from great pain over the bladder and along the penis, from constant straining and consequent loss of sleep, and all catheterization is attended with great agony. His health is completely destroyed, by loss of sleep and appetite, by constant drain of albumen, and the accompanying febrility. The author maintains that a bladder in this condition (cystitis of the third degree, according to Dittel), resembles and must be treated like an abscess cavity, which discharges by a long and tortuous sinus, and is constantly bathed by an irritating and decomposed secretion. The urethra, even if healthy, is insufficient for the discharge of the thickened secretion, and this imperfect drainage necessarily aggravates the diseased walls of the bladder. There is also generally a loss of contractile power of the bladder, and not unfrequently a sacculated condition of that viscus, both of which also tend to retention of the secretion. In such cases, the only operation likely to be of any benefit is perineal section with free drainage.

In 1803 Bouchardat, and in 1855 Fergusson, performed cystotomy for relief of cystitis, but these cases were not published.

In 1867 Parker, of America, published an account of a case which he treated in this way in 1851.

The following is a list of all the cases published up to now:

	Cured.	Benefited.	Uncured.	Died.
Weir collected 47 cases.	23	7	4	13
Post published 1 "	1	..	..	..
Brass " 1 "	..	..	..	1
Verneuil " 2 "	1	..	..	1
Harrison " 2 "	1	..	..	..
Thompson " 2 "	2	..	..	..
Dittel " 3 "	2	..	..	1
Total, . 58	30	7	4	16

Thus of 58 cases, 30, or rather more than fifty per cent., were cured, while 16, or thirty per cent., died; of these, however, 15 suffered from deep-seated kidney mischief, which in all probability existed before the operation—that is to say, the operation was performed too late. The author insists on the necessity of careful examination of the kidneys by palpation, percussion, and analysis of the urine before deciding on an operation.

In 34 cases, lateral section was performed; in 5, bilateral section; in 10, median section; in 5, urethrotomy; in 2, prerectal section. Sir H. Thompson and Prof. von Dittel both consider that external urethrotomy affords quite sufficient drainage, and is less liable to secondary hemorrhage. The author considers that the condition termed by the English "irritable bladder" is not a fit case for the operation, as the symptoms depend not on an abnormal condition of the bladder, but on some disease of the kidney or urethra.

He finally describes five cases of Dittel's, of which two recovered and three died.—*London Medical Record*, June 15, 1883.

Pathogenesis of, and Nervous Accidents in Diabetes.—Dr. F. Dreyfous has recently issued a pamphlet on this subject, in which, among the numerous theories, he has selected five which he places at the head of the list, and discusses in turn: 1. The gastro-intestinal theory (Bouchardat); 2, hepatic (Cl. Bernard); 3, nervous; 4, pancreatic; and 5, that theory which attributes it to nutritive trouble. This last theory has been revived by the works of Prof. Bouchard. M. Dreyfous considers diabetes as a disease acting on all the tissues. It may specially affect a particular organ, but he is averse to attributing diabetes to a lesion of a single organ; as a general disease, it must have a general cause. He therefore regards the theory of nutritive troubles, as expounded by Bouchard, as offering the best explanation of its etiology.—*Archives Gén. de Méd.*, June, 1883.

Pupil Phenomenon in Certain Pathological Conditions of Infancy.—Dr. J. Parrot has noticed that, in several children affected with acute diseases of the brain or its membranes, while they were in a comatose condition, if he pinched the skin of the epigastrium sharply, the pupil suddenly and decidedly widened, sometimes to a size thrice that of what it originally stood at, and he argues that while the general sensibility is lost, the sensibility of the skin may remain. He explains the phenomena on the supposition that it is reflex through anæmia, in consequence of the skin irritation, resembling the mydriasis resulting from a deep inspiration. The cases he relates are as follows: Six of tubercular meningitis (three with, three without, post-mortem demonstration), four of hemorrhage into the pia mater (two with post-mortem), three of hydrocephalus, and two in which no cerebral lesions were found. He relates seven cases of various diseases other than of the brain, where, during the state of insensibility preceding death, he was unable to elicit the phenomenon. The writer gives the following conclusion: "A child, with or without convulsions, which is in a state of coma, and whose pupils do not react on sharply pinching the epigastrium, is neither affected with tubercular meningitis nor with hemorrhage into the pia mater. It is in an advanced state of asphyxia, and its death is imminent."—*Edinburgh Med. Journ.*, July, 1883.

Simple Means of Obtaining Local Anæsthesia.—Dr. Cheize reports a case in which, wishing to remove an ingrowing toe-nail, and being without a spray producer, he covered the toe with a pledget the size of a crown piece, poured ether on it, and evaporated this by means of a pair of bellows; in five minutes anæsthesia was complete and lasted while the nail was removed, and the matrix seared with the actual cautery.—*Glasgow Med. Journ.*, July, 1883.

Addison's Disease and the Suprarenal Capsules.—From a study of the literature bearing upon this subject, Dr. Carl Burger arrives at the following conclusions: The suprarenal capsules are, from their structure, to be classed among the blood-vascular glands, and have no important vital function to perform. They stand in no causal relation to the bronzing of the skin. This dark coloring of the skin occurs not only in Addison's disease, but may accompany a variety of cachexiæ. Disease of the suprarenal capsules is not infrequent, and often runs its course without any of the recognized symptoms of Addison's disease. The greatest variety of lesions of the capsules may be seen in different cases of Addison's disease. Addison's disease depends upon an affection of the semilunar ganglia and of the solar plexus. This affection is usually caused by some disease of the suprarenal capsules, most frequently a tuberculous inflammation. Disease of the semilunar ganglia and solar plexus may arise from lesions of other organs than the suprarenal capsules, or may even be idiopathic. The symptoms of Addison's disease may thus be present without any lesion of the suprarenal capsules.—*Practitioner*, July, 1883.

Means of Provoking the Secretion of Milk.—When the milk-secretion is slow in appearing in a lying-in woman, or when it ceases from mental or moral causes, it may be made to return by cataplasms or fomentations of castor leaves applied to the breast, or by suction of the nipple, or by means of electricity. The mammary gland is slightly compressed between two sponge electrodes, and a feeble current passed through the gland for ten or fifteen minutes. This may be done twice a day. After the first few electrizations, the breasts swell, the large veins appear on the gland and the milk secretion is set up.—*L'Union Méd.*, July 5, 1883.

Diarrhœa in Infants.—Dr. Jules Simon, among other forms of diarrhœa, alludes to the cerebral, and says: "Diarrhœa may assume a cerebral form, that is, it may be accompanied by certain cerebral phenomena or by eclamptic convulsions, even although the diarrhœa may be but slight. As a result of a profuse drain, a comatose condition may be developed. Again, meningeal symptoms may develop and meningitis be simulated." Many of the reported cases of meningitis with recovery are, the writer thinks, only cases with meningitic symptoms. The various forms of diarrhœa are discussed in detail. For the treatment of cholera infantum, the writer recommends (1) preventive measures to be adopted during the premonitory catarrhal stage, and (2) after the full development of the affection, alcohol internally and externally, and mustard baths.—*Edinburgh Med. Journ.*, July, 1883.

Hæmatoma of Pancreas.—At the meeting of the German Medical Society in Prague, on March 9, Prof. Gussenbauer showed a patient in whom he had punctured a blood-tumor of the pancreas (*Wiener medicinische Wochen.*, No. 13). The man was forty years of age, and had in the previous year become the subject of an acute "gastricismus," said to be caused by a monster meal, of which sausages, beer, and spirits formed the staple portion. Since that time he had been the victim of gastric and intestinal disorder, and his complexion had changed to a yellowish-gray tint. When first examined by Gussenbauer, a fluctuating swelling was detected between the navel and the xiphoid cartilage, apparently retro-peritoneal, and of about the size of two fists. The diagnosis rested, therefore, between soft sarcoma, abscess, and cyst, including hæmatoma. The duration of the affection (about three months) was held to be against the possibility of sarcoma. The absence of pain and the fixation of the tumor were regarded as opposed to the diagnosis of abscess. The diagnosis, therefore, lay, according to Gussenbauer, between cyst and hæmatoma either of the pancreas or suprarenals. Why the idea of hæmatoma should have suggested itself to Gussenbauer does not appear. It is curious that he should have mentioned it in arriving at a diagnosis by the process of exclusion. The probability is that his knowledge of the subsequent course of the case colored these preliminary remarks on differential diagnosis. A median incision was made through the abdominal wall directly over the tumor. The parietal lamina of the peritoneum was in process of being stitched to the anterior wall of the tumor, when an accidental puncture of the swelling permitted the escape of a dark-colored fluid. By means of a trocar, 1900 cubic centimetres of the fluid contents were drawn off. The wall of the cyst was in many places smooth; in others, especially beneath the transverse colon, rough and irregular. After the cavity of the cyst had been washed out, antiseptic dressings were applied. For the first days, a sanguinolent fluid with some black lumps escaped. The fluid discharged was proved to contain blood. No fever followed the operation. After a few days, an eczematous condition was observed about the wound, such as is met with in cases of gastric fistula. Some of the discharge was collected, and found by experiment to digest albumen (forming tyrosin and leucin), and to transform starch into sugar. Prof. Gussenbauer said that the fistula had twice spontaneously ceased to discharge, but the appearance of fever necessitated the restoration of the fistula, after which the fever subsided. Examination still revealed, at the time the patient was shown, the presence of a cavity about an inch long, and rather more than an inch wide, from which the pancreatic secretion yet flowed. The conclusion at which Gussenbauer arrived was that a cyst had formed in the pancreas as the result of obstruction in the duct. This was most probably produced by the presence of a stone, the existence of which might also explain the occurrence of hemorrhage into the cyst. No mention is made of the actual detection of a calculus. The stools were not characterized by the presence of fat, and the patient presented no signs of disease beyond what have been mentioned. Prof. Chiari, in the course of some remarks on the origin of cysts in the pancreas, mentioned a case in which, as a result of "peripancreatitis," the whole of the pancreas had necrosed, and had been passed per anum. There was no doubt about the sequestrum being pancreas. The man recovered.—*Medical Times and Gazette*, June 30, 1883.

Resection of the Knee.—Until recently, M. Ollier has been an earnest opponent of this operation. Lately, however, he has completely retracted everything which he has said against it, and comes out as an earnest advocate for it. He has not altered his opinion of its value in young children. His investigations and those of Prof. Humphry show that if the whole of the lower epiphysis of the femur be removed, as is often necessary, the growth of the limb is interfered with to a disastrous extent; and if the surgeon be able to preserve a part of the epiphysis, yet the disturbance occasioned by the operation to the nutrition of the actively growing portion that is left behind is so great that even then the limb is seriously shortened. On this account M. Ollier rejects altogether the operation of excision of the knee for patients under eight years of age. He further adds, in reference to this, that these patients are excellent subjects for incisions into joints, scraping, and free drainage; and that, if these measures fail, amputation is the sole resource. In this view we believe he is in accord with British surgeons.

The change that has taken place in M. Ollier's estimate of the value of excision of the knee has resulted from the success attending in his hands the use of a strictly antiseptic plan of treatment.

The method of operating that he advocates is the subperiosteal, but he would vary its details according to whether it is performed for injury or disease. For injury he recommends a single vertical median incision over the front of the joint, extending quite into the joint above the patella, and also below where the ligamentum patellæ is to be split. He then saws through the patella vertically, but before completing the excision of the articulated surfaces through the opening thus made, he makes an incision for drainage on each side into the joint, one just in front of the biceps tendon, the other in front or behind the sartorius, and subsequently he places a drain in each of them. He then divides the crucial ligaments, bends the joint fully, protrudes the femur and peels off from it the periosteum and ligamentous and tendinous attachments, and saws off the end. He treats the tibia in the same way. The sections of the patella are then wired together, and the wound closed with a drain at its upper and lower end. When operating for disease he recommends that a freer opening be made into the joint, as more room is required for the following up of all the recesses of the synovial cavity and for the treatment of the patella itself. He therefore employs an **H** incision, making a straight cut into the joint below the patella, extending laterally not quite as far as the lateral ligament, and not being quite so long as the transverse diameter of the condyles. From each extremity of this he makes a vertical cut upwards and downwards, of a length varying with the extent of the disease and the amount of bone requiring removal. In this way two small flaps are marked out, of which the lower is always the smaller. Two incisions for drainage are made at the sides of the joint, as in the other operation, care being taken to have the inner one behind the sartorius tendon, and both of them made without injury to tendons. The upper flap is then raised, the joint well explored, and the patella, if necessary, removed by shelling it out from its anterior periosteal investment. The periosteum and ligamentous and capsuled attachments are then carefully peeled off from those parts of the femur and tibia which are to be removed, and those bones are sawn across. The synovial membrane is excised or scraped, as the case may be, and an opening for drainage made at the top of the suprapatellar pouch; then the bones are united by two wire sutures, and the cutaneous incision united, special care being taken to stitch together the cut ends of the ligamentum patellæ.

M. Ollier first points out that the aim of the surgeon is to obtain bony union after excision of the knee. To preserve the periosteum, where possible, directly aids in the ossific union of the two bones, while to leave the lateral ligaments as well as the posterior intact, is an important aid in maintaining the bony parts in exact and firm apposition. He lays considerable stress upon the importance of suturing carefully the divided ends of the ligamentum patellæ, so as to enable the quadriceps extensor muscle to counteract the tendency of the flexors to displace the tibia backwards. In cases of compound comminuted fracture into the knee-joint, M. Ollier is in favor of excision, even where a great length of bone has to be removed, and he suggests that in such cases it would be well to remove a part of the soft tissues in front of the joint; if not, when the ends of the bones are approximated the soft parts are greatly relaxed and bulge considerably around the bone, and as the flexors shorten more quickly than the extensor muscles, there is great danger of displacement of the tibia backwards, which can be prevented by artificially shortening the extensor tendon.—*Lancet*, June 30, 1883.

Influence Exerted by the Treatment of One Ear upon the Other Ear.—Eitelberg thus formulates his conclusions upon this subject:

1. In many cases the treatment of one ear causes an improvement in the hearing power of the other ear, which has not been treated, while a diminution of the hearing power is very rarely produced.

2. The greatest difference in favor of the improvement of hearing in the ear not treated occurred in cases of one-sided acute or chronic otitis media purulenta, with defective hearing in the other side.

3. In disease of both ears, when only one ear was treated, an improvement very often appeared in the other ear, not only in respect of the hearing power, but also in respect of the existing subjective noises.

4. In many cases an improvement, and even complete restoration, of the hearing power appeared in the ear not treated, not immediately upon the treatment of the other ear, but some time after.

5. In some cases, after a certain time had elapsed, the improvement in the hearing subsided and the ear returned to its former condition.—*New York Medical Journal*, July 14, 1883.

Treatment of Ulcer of the Stomach.—Dr. F. P. Atkinson reports a case of chronic gastric ulcer, which was quickly benefited by his treatment, though she had had no relief from any previous treatment. She had taken carbonate of iron, carbonate of soda with bismuth, prussic acid and calumba, bismuth, strychnine, and pepsin, effervescing citrate of potash with Schacht's solution of bismuth, and various sedatives, with a diet of beef-tea, mutton-broth, barley-water, milk and lime-water, but without there being any change in her general condition. The tenderness, the pain, and the vomiting continued unchanged, and when he was called in to see her she said she felt so weak that she was scarcely able to stand. She was exceedingly thin, and with the exception of a flush upon her cheeks, she had not a particle of color either in her face or lips, and her pulse was quick and thready.

Complete rest in bed was ordered. A teaspoonful of Brand's liquid essence of beef, or a teaspoonful of Valentin's meat juice in a little cold water, in small quantities every four hours; a wineglassful of milk and lime-water (mixed in equal proportions) to be taken frequently, and the body to be rubbed with olive oil morning and evening. The beef essence and milk were very gradually increased, and when the pain had almost subsided a little sponge cake, bread, barley-water, arrowroot, etc., were allowed, and at last, by very slow degrees, ordinary food replaced the liquid diet. Stimulants of all kinds were interdicted.

The medicinal treatment consisted of: 8 grains of tartrate of iron, 15 minims of tincture of conium, 15 minims of tincture of calumba, 15 minims of glycerine, in one ounce of water, three times daily.

No aperients were allowed. After a time the mixture was replaced by 15 minims of Bravais' dialyzed iron, three times a day. Since the last attack, about a year ago, the patient has very materially gained in flesh and color, and has been able to take ordinary diet, except for two or three days, and can walk four or five miles without fatigue.

After this she had another attack of vomiting, when liquor potassæ had to be given for a day or two first, and koumiss seemed to agree better than the milk and lime-water.—*Practitioner*, July, 1883.

Elongation of the External Nasal Nerve in the Treatment of Glaucoma.—A. Trousseau describes, in his inaugural thesis, a mode of treatment which seems well adapted to replace other operations for glaucoma, and which is likely to take high place in ocular surgery. This new method is due to M. Badal, of Bordeaux, who has seen its good results. Trousseau considers this new operation superior both to iridectomy and sclerotomy, and claims the following advantages for it: 1. It is a very simple operation, which can, in most cases, be substituted for iridectomy, and especially sclerotomy. 2. It succeeds in some cases in which these operations would fail. 3. It may often retard the more serious operations above mentioned, or even enucleation, and may prevent their being employed. 4. It is always more acceptable to the patients, and can always be tried without inconvenience, since in case of failure, operations on the eyeball may be resorted to. 5. It should be performed in the prodromal stages of glaucoma. 6. It promptly calms the pains of glaucoma, and often prevents a return. 7. It sometimes restores acuity of vision. 8. It abates intra-ocular tension. 9. In case of failure from elongation of the external nasal nerve, it may be well to perform a similar operation on other sensitive nerves of the orbit.—*L'Union Méd.*, June 7, 1883.

Morbid Changes of the Throat, Larynx, and Air-passages in some Acute Infectious Diseases.—Dr. E. Löri, of Budapest, gives the following as some of the changes which may be observed. In measles, twelve to thirty-six hours before the appearance of the skin rash, there is a diffuse or macular hyperæmia of the mucous membrane of the throat, larynx, and air-passages, diffuse usually in the mouth, macular on the tonsils and back of the throat. Within twelve hours from the appearance of this hyperæmia there occur small papules, first on the palato-glossal folds. About the time that the skin eruption appears there is profuse catarrh of pharynx, larynx, and trachea, with rapid shedding of epithelium, and frequent formation of superficial erosions. In the trachea the swelling around these latter may give rise to stenosis. According to the writer, the appearance of such ulcers in the larynx augurs the occurrence of tuberculosis. In scarlatina, the throat is affected twelve to thirty-six hours before the outbreak of the eruption. The writer states that there is often a sudden disappearance of the affection of the mouth and pharynx coincident with the eruption on the skin coming out. Frequently the eruption in the mouth closely resembles that found with measles. In rubeola there is also hyperæmia, diffuse or spotted, of the larynx and trachea. In smallpox the mouth is affected at the same time as the skin. The pustules are small and imperfectly filled, dry up in two or three days, and in six days are only represented by red spots. Bleeding from them is very common. The writer recommends the use of ice poultices round the neck, ice internally, and such astringents as tannin applied after puncture of the pustules. In chickenpox there occurs either diffuse hyperæmia of the mucous membrane, or a few scattered pustules. In typhus and typhoid, acute catarrh of the pharynx, larynx, and trachea is of frequent occurrence, and often proceeds in the larynx to the formation of ulcers, which have little tendency to heal, and occasionally, about the sixth or eighth week of the disease, cause perichondritis. For this latter condition, "when diagnosed with certainty," the writer recommends tracheotomy as early as possible. In whooping-cough there is usually some catarrh of larynx and trachea, and bleeding from the mucous membrane is frequent. The appearance, during the course of whooping-cough, of ulcers in the larynx, the writer regards as very suspicious of the onset of phthisis. —*Edinburgh Med. Journ.*, July, 1883.

Treatment of Tinea Capitis.—1. The group of diseases (*Herpes tonsurans*, *Porrigo favosa*, and *Porrigo decalvans*) comprehended under this title, being recognized as parasitical dermatoses, their rational treatment must, of course, be directed against the parasites. Two modes of procedure fulfilling this condition have been found preferable:

a. Epilation, which exterminates the parasites by destroying the organic structure in which they make their habitation.

b. The local application of croton tiglium, which accomplishes the same object by inflaming, without destroying, the derma and hair follicles, and thus removing the infested hairs.

2. In cases not too inveterate, a cure or decided amelioration is usually obtained within a period varying from three to eight months, and after from three to five applications of the remedy.

3. Clinical experience has shown that this treatment is not followed by any special tendency to relapse.

4. As to the other unfavorable results which have been charged to the employment of this remedy, viz., intense folliculitis, inflammation of the scalp and even the occipito-frontal aponeurosis, and erysipelas, it is precisely these evils which the croton-oil dressing, in the form recommended, is intended to avert. Neither the above symptoms, nor the alopecia which has been said to follow them, have been produced in any of our cases.

5. The only unpleasant consequences we have ever witnessed have occurred from the accidental transfer of the ointment to other surfaces, such as the conjunctiva, in which latter case a conjunctivitis might possibly arise; but this danger is easily obviated by protecting the scalp with a properly adjusted cap. We have never known such an accident to result in anything more serious than a slight conjunctival hyperæmia.

6. As to erysipelas, statistics show that it follows the croton treatment in an average of four cases out of a thousand, and that it has invariably been cured.

These risks are insignificant when measured against the extreme pain which epilation inflicts upon a child, and when also the insufficiency of the latter method is considered, since the hairs almost always break off under the operation.

7. To sum up our subject, the results of treatment by croton tiglium dressing may be pronounced highly satisfactory in *Herpes tonsurans*, and encouraging in *Porrigo favosa*, and in certain cases of *Porrigo decalvans*.—*Journ. of Cutan. and Vener. Diseases*, July, 1883.

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CHOLERA PROSPECTS.

Epidemic cholera has made a long stride towards Europe and this country by establishing itself in Egypt, where it is now prevailing in a severe form.

There is no doubt of its existence in Cairo, and probably it has reached Alexandria, although no definite intelligence on this point has yet been received. There are rumors of cases in Malta and Trieste, but these are improbable.

The governments of Western Europe have become alarmed; extra quarantine precautions are insisted on; the Spanish Cortes has voted a million of pesetas to meet the cost of preventive measures, and even the Local Government Board of England has issued a memorandum of warning, directing measures of precaution against the introduction of the disease.

Cholera has also been increasing in India. During the year 1882, 2,240 deaths from cholera were reported in Calcutta, being more than in any year since 1869, and thus far the number of deaths this year from this cause has exceeded that of 1882.

It is possible that European governments, which seem fully alive to the danger, and have had timely warning, may be able to check the disease; but if we take the history of preceding epidemics as a guide for prophecy, the check will be only temporary. It will not be surprising if the disease does not appear in Europe for several months, and in the mean time gradually die out in Egypt. Should this be the course of events, the present panic and spasm of sanitary activity which it has produced will subside; commercial interests will again come to the front; merchants and shipowners will be vociferous in their protests against the uselessness of quarantine: vigilance will relax, and the next thing will be rumors of cholera in European ports.

The danger to this country is comparatively small until the disease reaches Europe. It has usually, if not always, come to us by the lines of emigration from the north of Europe—from Hamburg and Southampton.

It is no guarantee against the presence of the cause of cholera in a ship that the disease did not prevail in the port of departure at the time of sailing, or that no cases have occurred on the vessel during the voyage, for it is sufficiently probable that the cause of the disease has been carried far into the country by the baggage of emigrants who showed no signs of the affection until this baggage was unpacked, to make it prudent to insist on thorough exposure and disinfection of all such material where there is any ground for suspicion that cholera may have existed in the vicinity from which the emigrants come.

It must be remembered also that the precautions taken at Canadian ports are nearly as important for our protection as those of our own.

But supposing the disease is introduced, say next spring—and there are at least three chances out of five that it will not reach us before that time, while it is about an even chance that we may have it within a year—are we prepared for it?

Remembering that the probabilities are that this is a question of local cleanliness and freedom from pollution of water-supply, we fear that the answer for many cities must be, Certainly not.

The cities where excreta are stored in cesspools and privy-vaults, where the sewers are badly constructed, foul, leaky, and in places little more than elongated cesspools, where the soil has become gradually saturated with organic matter, and where wells are used by the people because the water is cool and sparkling, even though a general water-supply has been introduced, and the cities whose general water-supply is taken from a stream into which, ten or twenty miles higher up, is discharged the sewage of a village or town—all these are in danger, and must do something more than scrape their streets and alleys, and scatter a little lime over the worst places, if they would have an insurance against an epidemic of cholera which is of real value.

THE SURGICAL TREATMENT OF EMPYEMA.

Osler, Fenger, and Jas. C. Wilson have each contributed to our columns, lately, extremely interesting and instructive lectures or papers on empyema and its treatment, which naturally renew our interest in the subject. The topic is old—for pleurisies with effusion doubtless have always existed—but there are few subjects indeed as to which it does no good to review our knowledge from time to time, to seek warning from our errors, encouragement from our improvements and successes, and from both to gain incentives to closer observation, deeper research, and further triumphs.

When the aspirator was first invented many jumped at once to the conclusion that this gave us the whip-hand of all such accumulations. For absolute certainty of diagnosis the aspirator is essential. It is demonstrative. But, in passing, let us add that it is often forgotten that we have always at hand a simple, effectual, and cheap aspirator in the hypodermic syringe, which for diagnostic purposes is equally efficacious.

But, while extremely useful and often curative in children and in cases of serous or sero-fibrinous effusions, it was soon found that in adults, and especially if the fluid were purulent, repeated aspiration would not cure, but give only a temporary relief. What was wanted was not only a safe, speedy, and thorough evacuation of the pus, but its *continuously* thorough evacuation. That is to say, as in the case of any other purulent accumulation, *e. g.*, an abscess, so in purulent accumulation in the chest the same rule holds true—free exit. Different methods of reaching this result have been advocated by various practitioners. One uses a permanent canula, another a drainage-tube, a third free incisions, a fourth even resects a rib. With each of these methods we may use or modify, or discard antiseptic precautions. With each we may use injections to wash out the cavity, or not, as is judged best. Whatever modifications of details are adopted, free escape for the pus is the cardinal point to be secured, and if we can prevent decomposition of the pus, so much the better. *Il y a fagots et fagots.* So too there is pus and pus—some sweet and healthy, and some ill-smelling and decomposing. In all the latter cases certainly, and as a rule even in those in which the pus is sweet, washing out the chest with disinfectants, permanganate of potash, iodine, corrosive sublimate, etc., is clearly indicated. Carbolic acid should not be used, for the dangers of its absorption with poisonous symptoms is an undeniable risk.

Resection of the ribs, except when so close to each other as to prevent free drainage, is not advisable. Especially is this true in the resilient chest of children. On the other hand, in old cases of empyema in which the lung is held fast by adhesions and the rigid chest-wall cannot fall in to meet it, the thoracoplastic operation of Estlander, in which several ribs are resected to allow the approximation of the two surfaces, is certainly demanded.

Paracentesis is not without its dangers. The trocar if heedlessly used may wound the lung; even the moral fear of the operation or the pain attending it has produced fatal syncope, but this is so rare a possibility as to be practically disregarded, especially as both may be modified or avoided by soothing and gentle personal control of patients, and the use of local anæsthesia; too hasty withdrawal of the fluid, especially if done with forcible and uneven suction, as by a syringe, may injure the more or less firmly fastened lung and produce hemorrhage from the ruptured adhesions, or even rupture of the lung tissue with pneumothorax. To avoid injury to the lung, as well as to remove all the pus, Parker has even proposed to allow carbolized air to enter the chest by a hypodermic needle, but injections would effect both results better and avoid the dangers of pneumothorax.

But *per contra*, it is not to be forgotten that inaction has its dangers as well as action. A Fabian policy is not always the wisest. While attempting the absorption or elimination even of a serous fluid by purely medical means, sudden death may occur from acute œdema of the well lung; by hampering the heart's action if the effusion be very large in amount; by a kink in the great vessels, especially the vena cava, if the heart be greatly displaced; or by thrombosis of the pulmonary vessels or by syncope: and if these more immediate risks are escaped the remoter ones of exhaustion, septicæmia, and tuberculosis are none the less real, because deferred.

Pus is always an enemy, and must be got rid of as speedily as other indications make it wise to do it. Homén saved half of his 52 cases treated antiseptically. Fiedler has done thoracentesis 150 times in 112 patients, saving 21 in good health, 25 died or were dying with phthisis, while 66 who also had phthisis were cured so far as any return of the effusion was concerned.

PARALDEHYDE—A NEW HYPNOTIC.

Every addition to our resources in the direction of safe and efficient hypnotics is especially desirable. We owe to our Italian colleagues this new contribution. It may be desirable to put before our readers some exact information regarding the physical and chemical qualities of this substance, especially as it is likely to enact so important a *rôle* in the therapy of the future.

Paraldehyde is a polymeric modification of aldehyde. What is aldehyde? This is, in brief, alcohol deprived of its hydrogen, and although a generic term applied to a group, in this connection means acetic aldehyde. Paraldehyde being merely the same substance in respect to its atoms, but which are arranged differently, may be suspected to have analogous properties. Above the temperature of 51° F. it is a colorless liquid, having a peculiar odor, and a specific gravity of .998. It boils at or about 225° F., and it is soluble in 8 parts of water at 52° F. Aldehyde acted on by chlorine is converted into chloral. These chemical facts indicate the position of paraldehyde from the physiological standpoint, and probably suggested its utility as a hypnotic.

For medicinal administration, the dose ranges from ʒss to ʒijss, and it is said the best results are had from the maximum dose.

In the trials made of it, paraldehyde has proved to be an admirable hypnotic, possessing most of the qualities but none of the dangers of chloral. It acts first on the cerebral hemispheres, and causes torpor without the preliminary excitement so common in the action of the sleep-producing class. After the hemisphere, the action extends to the medulla oblongata, and then to the cord. A lethal dose suspends the functions of the medulla and the respiratory centre, and the action of the heart ceases after the respiration. In respect to the effect on the heart, paraldehyde is far safer than chloral; indeed, it appears to be free from the danger which renders the administration of chloral in large doses so doubtful an expedient. Its effect as a hypnotic is not so persistent as that of chloral, but it may be maintained by the repetition of sufficient doses. No ill-effects of any kind—no after-nausea, or depression, or headache—have been observed to follow its very free administration.

Paraldehyde may be prescribed as a hypnotic in the various conditions usually requiring such a remedy—in fevers, rheumatism, gout, prurigo, etc. (Morselli). It is, however, in mental and nervous disorders that it will probably be most used. By the Italians, Albertoni, Morselli, and others, it has been prescribed with very marked success in acute mania, in the wakefulness of dementia paralytica, in hysterical paroxysms, and in insomnia arising under ordinary conditions. They have found it especially useful in that form of wakefulness caused by the fear of inability to sleep. Surely, if these statements be confirmed, an important remedy has been discovered in paraldehyde.

THE ORGANIC BASES OF URINARY CALCULI.

Ebstein has recently called attention to the fact that all uric acid concretions, whether in the shape of sand, gravel, or stone, contain a framework of albuminous material which remains after the uric acid is completely dissolved out. The same is true of calculous formations of oxalates and phosphates.

We cannot determine from the brief abstract which Prof. Ebstein publishes in the *Deut. med. Wochenschr.* for May 16, whether he considers this a new fact, but we presume he does from the fact that he considers it worth while to announce it in advance of his forthcoming work on "Calculi." Be that as it may, Dr. H. Vandyke Carter, in his little book on *The Microscopic Structure and Formation of Urinary Calculi*, published in 1873, alludes to this organic basis or framework, which he speaks of as being finely granular and fibrous, as present in calculi made up of uric acid, urates, oxalate of lime, and phosphate of lime. He speaks of it as an essential part of these submorphous structures, and as especially distinct in calculi made up of urates and of phosphate of lime. The essential nature of this organic matrix was also foreshadowed by Prof. Rainey's paper, *On the Formation of Shells*, London, 1858; and Dr. W. M. Ord's paper, *On Molecular Coalescence, and on the Influence exercised by Colloids upon the forms of Inorganic Matter*, published in the *Quar. Journ. Mic. Sci.*, 1872.

Prof. Ebstein also claims to have discovered a certain relation not heretofore appreciated between the uric acid infarcts so common in the kidneys of new-born children and the general process of calculous formation. This is also promised in the forthcoming volume referred to.

THE SALTS OF LITHIA AS SOLVENTS OF URIC ACID CALCULI.

Garrod, who introduced the salts of lithia, for the purpose of alkalizing the blood and urine, has brought forward in his Lumleian lectures, now in course of publication, fresh evidence in support of his views. Of the alkalies now employed in medicine, lithia is the most powerful as an alkali *per se*. But Dr. Roberts, of Manchester, England, an authority in renal pathology, has called in question the solvent powers of lithia, over uric acid calculi, which Garrod had strongly affirmed. Roberts submitted experimental evidence in support of his position that the salts of potash had greater activity as solvents of uric acid concretions than lithia. Dr. Garrod has, however, in the lectures above referred to, clearly shown the fallacy in Dr. Roberts' experiments, and has demonstrated anew and conclusively his original postulate that lithia is the most powerful of the alkaline group in respect to its solvent action on uric acid. Several consequences follow this demonstration: If the problem consists in the use of an alkali to effect the solution of an uric acid calculus, say lodged in the pelvis of the kidney, the agent most certain to accomplish this, is a salt of lithia.

Again — if a remedy is required to increase the alkalinity of the blood, to effect the oxidation of uric acid, and to prevent the maladies due to an excess of this acid in the blood, lithia promises the best results. We have seen from the use of lithia, in that morbid complexus entitled lithæmia, the most conclusive evidence of its power to effect the oxidation and excretion of the offending substance. A very elegant mode of exhibiting lithia is to give the carbonate in effervescence. A granular effervescent salt is now largely used in England. The citrate in solution in water is the usual form of the remedy now prescribed in this country.

THE first number of the Journal of the American Medical Association, issued under the date of July 14th, has just come to hand. It is a double-column quarto-page journal, and contains the minutes of the late meeting of the Association, original articles on Tonsillotomy without Hemorrhage, by W. C. Jarvis, on the Treatment of Otorrhœa with Antiseptic Powders, by H. Gradle, and on the Restoration of a Lost Cheek, by a Flap from the Shoulder, by Edmund Andrews, M.D. Then follows a department of Medical Progress, an editorial on "The Change," and finally, departments of Correspondence and News Items complete the number.

Dr. N. S. Davis, when accepting the editorship, disarmed criticism by asking the Association not to expect too much of him in the first issues. It, therefore, only remains for us to express the pleasure it affords us to welcome the new journal, and cordially to wish it the fullest measure of success.

SOCIETY PROCEEDINGS.

AMERICAN OTOLOGICAL SOCIETY.

Sixteenth Annual Meeting, held in the Catskill Mountains, July 17, 1883.

(Specially reported for THE MEDICAL NEWS.)

THE American Otological Society held its Sixteenth Annual Meeting at the Hotel Kaaterskill, Catskill Mountains, N. Y., on Tuesday, July 17th.

The Society was called to order at 10.30 A. M. by the *Vice-President* DR. J. S. PROUT, of Brooklyn, N. Y.

Twenty-three members were present. Four new members were elected.

After the routine business the order of the bulletin was taken up, on which the titles of thirteen communications were presented.

DR. W. W. SEELY, of Cincinnati, Ohio, reported

A CASE OF PRIMARY EPITHELIOMA OF THE AURICLE; REMOVAL OF THE ENTIRE AURICLE BY THERMO-CAUTERY.

The case was that of a man, sixty years old, who had been bitten, while asleep on the right ear by a rat. The wound never healed, though treated in various ways, and presented at the time he was first seen by Dr. S., a large, sensitive, readily bleeding sore. It had developed rapidly during the last year, and bled at the slightest irritation, so that the man had an exhausted and anxious appearance. The original point of the wound was near the summit of the helix; at the time of Dr. S.'s first examination it involved a large portion of the auricle. The entire auricle, except the lobule was swollen and reddened; the skin behind the ear for some distance was reddened, but not infiltrated, the glands not enlarged. The entire auricle was removed by thermo-cautery (Paquelin's); slight hemorrhage; three or four small arteries spurting a little, till touched; the surface entirely covered with a thick layer of boracic acid. The suppuration was but slight and the patient sent home in less than five weeks with a perfectly smooth scar. The orifice of the meatus retained its normal calibre.

The author quoted a few cases which have been reported in the literature of otology, and from the small number of these cases, comes to the conclusion that primary epithelioma of the auricle is a *rare* disease, notwithstanding the English translation of Politzer would make it appear to be by no means rare. The specimen was presented with the paper.

DR. J. A. ANDREWS, of Stapleton, Staten Island, presented a paper on *The Intermittent Perception of Sound, as Conveyed through the Air and the Cranial Bones, with a Brief Summary of the Results of Treatment in Chronic Aural Affections, with Impaired Hearing*, which was read by title and referred to the Committee on Publication.

DR. J. A. ANDREWS also presented a paper on

THE RECOGNITION OF BRAIN COMPLICATIONS IN AURAL AFFECTIONS.

Five cases were detailed from his own experience, in which death occurred secondary to an aural affection. He called special attention to the importance of examining the eye in aural affections in which other symptoms, although obscure, excited suspicion of an intra-cranial complication. In all of his cases an ophthalmoscopic examination revealed papillitis. He considered the condition of the disk, either papillitis or a hazy, slightly œdematous appearance of the optic-nerve disk, a very valuable corroborative evidence of a cerebral complication, especially where the other symptoms were obscure. Dr. Andrews considered the character of the headache as an important symptom. He believed that it was more continuous, occurred less in paroxysms in abscess of the brain than the headache in brain tumor. Fever was very often absent, even in the terminal stage. From his own observations, the sight is most affected on the side of the cerebral lesion.

In connection with this subject, DR. S. SEXTON, of New York, presented a paper on *External and Internal Inflammation of the Mastoid, with Cases*, which was read by title and referred to the Publishing Committee.

DR. C. H. BURNETT, of Philadelphia, reported

A CASE OF MASTOID DISEASE; ARTIFICIAL PERFORATION OF THE BONE; TEMPORARY RELIEF; DEATH FROM PYÆMIA;

and DR. READ J. MCKAY, of Wilmington, Del., a case of

ACUTE DESQUAMATIVE INFLAMMATION OF THE EXTERNAL AUDITORY CANAL; ACUTE OTITIS MEDIA, MASTOIDITIS, AND CHRONIC MENINGITIS; RECOVERY.

Dr. Burnett in his paper showed that the purulent disease may not necessarily affect the brain in cases of mastoid disease, but may produce death by pyæmia of a chronic nature, affecting organs remote from the ear, as the lungs or the liver. Also, that the operation of trephining the bone is comparatively unattended with danger, and affords the one slim chance of death in cases of true intra-mastoid disease, which must necessarily furnish an embolic source, if the products of inflammation, *e. g.*, purulent and cheesy *débris*, are pent up in the mastoid cavity. For in such cases there are the chances of death from embolism, while none arise from the operation. In the case reported by Dr.

Burnett, the patient survived the mastoid operation two weeks; the wound nearly healed, when the man was seized with a chill, and rapidly sank from embolic hepatitis.

Dr. McKay's case occurred in a woman, 77 years old. She was delirious and extremely ill for months. She recovered under hypodermic injections of morphine and minute doses of calomel, with liberal use of stimulants and food.

The discussion on these different papers occupied a great part of the morning session, and was continued at the evening session.

Dr. Sexton exhibited a former patient, now a waiter at the hotel, who had been suffering from mastoid disease, in consequence of chronic suppurative otitis media complicated with ozæna. In this case a natural opening formed, the remnant of which still showed in a dent in the bone, and he had kept this open until the discharge ceased. For treatment he had only given calcium sulphide.

In a very large number of cases of aural diseases in general, and of the mastoid in particular, he found no occasion for trephining the mastoid. He relied especially upon the calcium sulphide. If this remedy has proven unsuccessful in the hands of some of the members, it was because too large doses had been given. The dose should never exceed one-tenth of a grain. Of late he does not apply leeches. He calls attention to the frequency of the pus burrowing through the posterior wall of the meatus and he tried to favor this process and removed sequestra as soon as possible. He does not consider pain so important in regard to indications for operative interference; there is other evidence needed. Moreover, the pain is not confined to the mastoid; oftener the side of the tympanic cavity is the seat of the pain, more than in any nerve distribution in the mastoid cells. He asked Dr. Knapp what value the ophthalmoscopic examination had in diseases of the mastoid with brain complication.

Dr. Knapp remarked that neuro-retinitis is not a frequent, but when present a most important, symptom, because it is objective, and is positive evidence that the inflammation has extended to the cranial cavity. It is not only of very great value in determining the appropriateness of opening the mastoid in many cases, but also in furnishing us a kind of barometer, whose rise and fall (that is, increase and decrease of the neuritis) will point toward aggravation or amelioration of the tympano-mastoiditis. He has found it of peculiar value at the period when the opening of the mastoid may be allowed to close, which should not be as long as the neuro-retinitis has not yet disappeared.

In cases where the indications for opening the mastoid were doubtful, he relied more than on any other symptom upon a *constant intense pain*, radiating from the ear and mastoid over the corresponding half of the head, sometimes being more pronounced at the vertex, at other times more in the forehead or the occiput.

From the drift the discussion had taken, it would almost appear as if there were no precise indications for the opening of the mastoid. He desired to state that he considers this operation as legitimate and in many cases as unambiguously indicated as any surgical operation, for instance that of glaucoma.

In *acute* otitis, he considers it indicated when the general and cerebral symptoms, in spite of rest and antiphlogosis, are constantly increasing, the pain extends over the whole half of the head, the mastoid is tender and puffy, and especially when together with the aggravation of these symptoms a stoppage or considerable diminution of the discharge points to retention of pus, the natural escape of which cannot be reëstablished by warm ear-baths, steaming, poulticing, etc.

In *chronic* otitis, he considers it indicated when symptoms on the external face of the mastoid, a scantiness or absence of discharge, more or less developed cerebral symptoms with periodic aggravations and the inefficiency of local non-operative treatment demonstrate that pus, cheesy material, or sequestra are retained in the mastoid cavity. If nature has made a perforation and the disease does not tend to a speedy recovery, this opening is to be regarded as insufficient, and should be enlarged with the chisel, whereupon the probe will determine the character of the contents of the mastoid cavity, and a sharp spoon, forceps, syringe, and a drainage-tube, will secure the recovery.

Dr. Gruening remarked that in the case shown by Dr. Sexton, it was not the sulphide of calcium, but nature, to which the recovery was due, and in order to be consistent with his theory, in place of keeping the opening made by nature open until the discharge had ceased, he should have endeavored to close that opening.

Dr. Holt had seen forty cases of mastoid disease with three deaths in two thousand cases, but had never trephined the mastoid.

Dr. Burnett quoted statistics from Schwartze's series of operations, to again point out the comparative freedom from danger in the operation.

Dr. Strawbridge had seen five thousand cases of purulent middle-ear disease, with about seventy cases of mastoid disease. Only one death occurred, in a child, forty-eight hours after the disease set in. Although he had thoroughly prepared himself for the operation by repeated operations on cadavers, he had never had a chance to do the operation on the living body, as he generally succeeded with poulticing and good food in relieving his cases. He believed the poulticing acted as a stimulant.

Dr. Bartlett said that in regard to the value of ophthalmoscopic examination he had often examined a case of melancholia, occurring in his own family, and found double optic neuritis very plainly marked; that as the case advanced the appearance of the optic disks returned to a nearly normal condition, when convulsions occurred and the case died. The ophthalmoscopic appearance of neuro-retinitis descendens usually indicated an acute stage of a meningitis, and as the brain disease advanced and tissue changes supervened, with degeneration, the neuro-retinitis subsided. These objective appearances assisted very much in deciding the plan of treatment to be pursued. Mastoiditis often occurred in the lake region where he resided and he had lost cases with this disease, the attack often being so sudden and severe that little could be done. The cases always had, or had previously had, an offensive otorrhœa, were having chills at very irregular intervals and as the disease advanced would have pain about the ear, general temperature increased, diarrhœa, and also perhaps a hobbling pulse and slight bronchitis. He had never trephined, but had succeeded by poulticing the mastoid night and day with flaxseed-meal poultices applied as hot and moist as the patient could bear every half hour, in relieving the pain and urgent symptoms, and causing the mastoid to suppurate enough in forty-eight hours, or so, to show where it should be opened, when a stout scalpel was sufficient to do so. He also advised large doses of quinine, stimulants, and proper food. If he should ever have a case in which the symptoms were urgent, and poultices did not cause the mastoid to suppurate, he would not hesitate to trephine. He thought the application of leeches for pain, in such cases, contra-indicated as too depressing, the patient could not afford to lose any blood—opium was much better. He thought also that sulphide of calcium was contra-indicated in such cases, because it accelerated suppuration in every part of the body where it might be going on. If pericarditis had commenced, it increased it; if purulent foci were being deposited in the lung or liver, it increased the suppuration about them. He thought the picture presented by such a case was one of general disease like pyæmia, and the local indication was to open and remove the poison as quickly as possible from the mastoid.

Dr. E. E. Holt, of Portland, Me., reported a case of

TERATOID TUMOR OF EACH LOBE; SEVENTH RECURRENCE, WITH DIAGRAMS.

The patient was a young woman, 29 years old, of light complexion, and good average health. The morbid growths were of unusual interest in several respects:

1. They followed promptly perforation of the lobe and wearing of gold earrings.
2. They have repeatedly recurred during a period extending over twenty years.
3. They have undergone remarkable change in structure.

In proof of this latter assertion, a portion was read of a letter from Dr. J. H. Ripley, of New York, who had removed the tumors several times, and who stated that they contained nothing but dense, interlacing, fibrous tissue; and an exhaustive examination by Dr. Edward Preble, of Portland, Me., who found that the said tumor contained germinal matter in abundance, with the following tissues: myxomatous and adenoid tissues, giant-cells, fibro-plastic tissue, loose areolar tissue with infiltrated fat, innumerable elastic fibres, fine and coarse fibrous tissue, hyaline, reticular, and fibro-cartilage, smooth muscle, fragments of large bloodvessels, well-developed skin with corium, papillæ, rete mucosum and epidermis, hair-follicles, hair and sebaceous glands, together with certain unclassifiable structures.

Dr. E. E. Holt also presented some

OBSERVATIONS ON THE HEARING POWER IN DIFFERENT CONDITIONS.

He gave an account of the examination of the following series of cases: Twenty-four cases of chronic non-suppurative otitis media from private practice; twenty-four machinists, twenty-four boiler-makers, and twenty-four persons with normal ears. The hearing power was tested by the voice, tick of a stop-watch, tuning-fork, and Kœnig's rods, and the average age, ratio of bone to aërial conduction, and the audibility of Kœnig's rods in three series of tests were compared with each other and with the normal ear. It was ascertained that the ratio between bone and aërial conduction diminishes in a corresponding degree to that of the hearing power for the voice, and that the average audibility for the upper limits of Kœnig's rods was quite equal to the average normal of 40,000 v. s. as determined by Dr. Blake. Therefore the conclusion was drawn that the loss of hearing in the machinists and boiler-makers was due much more to a defect in the conducting than in the perceptive part of the organ of hearing, for the following reasons:

1. Because of past history or present condition of catarrh of the middle ear and naso-pharynx.
2. Because the tuning-fork, when placed vibrating in the centre of the teeth, was heard louder and longer in the more affected ear, and the sound of it was invariably increased by pressing on the tragus and closing the meatus.
3. From the fact that, had there been any considerable disease of the labyrinth, they would not have responded so nearly to the normal average audibility for the upper limit of Kœnig's rods, since such an astute observer as Dr. Blake, who has made extensive use of them, has never had a case of labyrinthine disease without a *marked loss of hearing* for the Kœnig's rods.

In regard to hearing in a noise, several of the three series made a voluntary statement that they could hear better in a noise. These were carefully tested in a quiet place and then in a noise, and in every instance there was no improvement of hearing in the noise; on the other hand, when the voice was used at the same tone, it was not heard quite as well in the noise as in a quiet place.

Dr. Ch. J. Kipp, of Newark, made some remarks

ON THE ASSOCIATION OF AURAL DISEASE WITH SIMPLE SPARKLING SYNCHISIS OF THE VITREOUS HUMOR.

He had the records of seven cases of sparkling synchisis, in six of which aural symptoms were present. In the seventh case it was not known whether ear disease was present or not. In five of the cases where the disease was in one eye, the aural affection appeared in the ear of the same side in two cases, in both ears in three cases. In four of the cases the ear trouble was probably situated in both the middle and nerve apparatus. In one case there was chronic suppurative otitis media, which had been preceded for years by impaired hearing without otorrhœa. In the sixth case there was absolute deafness of one ear since infancy. Otological literature contains no record of similar cases, and the author thinks the association of the two affections in his cases may have been merely accidental. He publishes his cases with a view of inducing others to examine their cases of synchisis for aural trouble and thus settle the question.

Drs. Little, Webster, and Knapp stated that since Dr. Kipp at the Fifteenth Annual Meeting made an oral communication in regard to the same subject, they have taken especial pains during the past year to examine all their cases of synchisis for aural disease, but that in every case the result was negative.

Dr. C. A. Todd, of St. Louis, Mo., reported a case of *Anomalous Sebaceous Gland in Immediate Proximity to the Auricle*. Dr. Todd being absent, his paper was referred to the Publishing Committee.

THE SIGNIFICANCE OF THE TRANSMISSION OF SOUND TO THE EAR THROUGH THE TISSUES IN AURAL DISEASE,

was the title of a paper by Dr. S. Sexton, of New York. The conclusions drawn by the author are summed up in this manner: 1. When the vibrating tuning-fork, placed on teeth or vertex, is better heard through the tissues on one side, it simply indicates that the better ear excludes wholly or in part such (tissue) transmission; but it does not prove that the auditory nerve in either is affected. (Of course, if the nerve of audition be gravely affected, sound will not be heard by any method of conduction.) 2. If the conductive mechanism is absent or greatly damaged in one ear, while the other remains more or less normal, aërial transmission will be found to be ineffectual in the diseased ear, while the tuning-fork, allowed to vibrate as before, will, therefore, be best heard in the diseased ear, while its vibrations will be almost entirely excluded from the healthy ear. 3. In labyrinthine disease pure and simple, the middle ear being normal, the tuning-fork would be best heard by aërial conduction, because bone conduction would be excluded. (In those extreme cases where destructive disease of the nerve has taken place, impulses of sound may be appreciated irrespective of either the transmitting or labyrinthine structures; thus the deaf-mute is conscious of the sound of thunder, artillery, drums, stamping with the foot upon the floor, and the like.) 4. If the above deductions be true, we may conclude that the tuning-fork is of but little, if any, value in the differentiation of aural disease, and the same applies to Kœnig's rods.

DR. BURNETT stated that he had found the tuning-fork experiment unreliable on account of inaccuracy of the patients. His experience was very similar to that of Dr. Sexton; he lost reliance in the tuning-fork because he could not rely upon the answers of the patients.

DR. HOLT could not agree with Dr. Sexton in regard to the unreliability of Kœnig's rods. It can at any moment be ascertained whether the statements are false or not. If the finger is placed upon the rod and the patient states that the vibrations are still perceived, there is of course a wrong statement, and as it is easy to interrupt the vibrations at any time this becomes an excellent means of control.

DR. KIPP had in the last years lost reliance upon the tuning-fork for the same reason as had Dr. Burnett.

DR. SEXTON exhibited

PHOTOGRAPHS ILLUSTRATIVE OF AURAL DISEASE.

The photographs included perichondritis, facial paralysis from aural disease, ear closed from adhesions during granulation, tumor of the dura mater extending through the temporal bone, fatty tumor of the ear, sloughing of the auricle from the use of gold rings, fibrous tumor, mastoid inflammation with inflammation of temporal bone, osteoma, hæmatoma auris, spontaeous cure of mastoid disease.

He also exhibited two kinds of syringes for use by patients (one a soft rubber, the other a metallic one), and a curette, lightly curved and roughened on the concave surface for the removal of foreign bodies.

Some objections was made to the use of the metallic syringe by patients, the general opinion of the members being more in favor of Davidson's syringe for this purpose.

DR. H. KNAPP, of New York, reported

AN OBSTINATE CASE OF DESQUAMATIVE OTITIS MEDIA, FINALLY CURED.

The patient, when in her third year, had scarlet fever, and otorrhœa with more or less impairment of hearing. When first seen by Dr. K., in 1876, she was thirteen years old, there were large perforations in both drumheads, moderate discharge. The posterior walls of both meatus were swollen and covered with white, scaly masses, which were insufficiently removed by syringing. The treatment after syringing consisted in dropping lukewarm water in the ear three times daily, and sulpho-carbolate of zinc one per cent., in alcohol twenty per cent., and water eighty per cent. A rapid and great improvement occurred, lasting, however, only a few days. Under different kinds of treatment this condition of alternating improvement and aggravation lasted for years. The perforations of the membrana tympani varied in size, so that sometimes nothing of the membrane could be seen, while at other times it reappeared at the periphery, forming a thick ring with a sharply defined round or oval opening, which at rare and short intervals was closed altogether. Corresponding with this was almost normal hearing power or that power greatly diminished. In the winter of 1880–81 she was advised by Dr. K. to put herself under the charge of Dr. Hackley, to try whether the insertion of an artificial drum membrane by his hands might not improve the condition. And so it did at first, but afterward it became ineffective, and the condition was as bad as before, when in 1882 she returned to Dr. K.'s treatment. He then tried stimulating treatment, cotton pellets steeped in glycerine and nitrate of silver solution. This made the scales detach themselves, the discharge became more profuse and finally polypoid growths projected from the luxuriant mucous membrane. These were removed in two sittings, and a solution of boracic acid in absolute alcohol was instilled. Gradually, improvement took place, discharge became scant, and the swollen membrane assumed almost normal thickness; finally it ceased and the drumhead formed again as a delicate, pale-grayish membrane. When in July, 1883, Dr. K. saw the patient again, the membrane was entirely restored, short process, handle and cone of light could be recognized and hearing was v. $\frac{20}{20}$.

Dr. K. draws from this case the conclusion that desquamative otitis media under palliative treatment may go on, temporarily improving, then becoming worse, bursting the drumhead over and over again, and that this condition will continue until the seat of the disease is laid bare, the luxuriating parts destroyed, and the tympanic cavity and meatus entirely cleaned out. When in his case the character of the disease from being torpid became acute, it could be treated successfully.

DR. THEOBALD asked if the second drumhead was not cicatricial tissue rather than restoration of the drumhead proper.

DR. SEXTON had seen a number of cases where granular tissue came through two or three perforations, and where, for that reason, the membrane could not be seen. After removal of this granular tissue, the membrane cleared up, the perforations closed by a new growth of cutaneous layer, but not of membrana tympani proper.

DR. JONES had seen three cases of entire reforming of the membrana tympani.

DR. THEOBALD thought such cases must be very closely examined. He had often seen partial restoration, and if this would come from many points it might be called a reforming of the drumhead, but not in the sense he alluded to, that is, a normal membrana tympani with all its details.

DR. MCKAY had in no case found reforming of the membrana tympani in the sense of its being a regular drumhead.

DR. MERRILL had seen one case of entire destruction of the drumhead, where in five weeks time it had entirely repaired with perfect hearing power.

The morning session lasted from 10.30 A. M. to 2 P.M.; the evening session from 7.30 to 11.30 P. M. At the close of the evening session the following were elected

OFFICERS FOR THE ENSUING YEAR:

President.—Dr. Charles H. Burnett, of Philadelphia.

Vice-President.—Dr. J. S Prout, of Brooklyn.

Secretary and Treasurer.—Dr. J. J. B. Vermyne, of New Bedford, Mass.

Committee on Publications.—Drs. J. J. B. Vermyne, C. J. Blake, J. Orne Green.

Committee on Membership.—Drs. John Green, H. G. Miller, A. Mathewson.

The Society voted to meet next year the day before the Annual Meeting of the Ophthalmological Society, and at the same place.

AMERICAN OPHTHALMOLOGICAL SOCIETY.

Nineteenth Annual Meeting, held at Kaaterskill, N. Y., July 18 and 19, 1883.

(Specially reported for THE MEDICAL NEWS.)

WEDNESDAY, JULY 18TH, FIRST DAY.

MORNING SESSION.

THE Society was called to order at 10 A. M. by *the President*, DR. HENRY D. NOYES, of New York, who made a few congratulatory remarks, and then appointed the following committees:

Committee on Bulletin.—Drs. F. B. Loring, of Washington, and E. W. Bartlett, of Milwaukee.

Business Committee.—Drs. John Green, of St. Louis; E. Gruening, of New York; O. F. Wadsworth, of Boston; S. Theobald, of Baltimore; and E. Dyer, of Newport.

The Treasurer's report was read and referred to Dr. David Webster, of New York, who subsequently reported that all the accounts were correct. The report was adopted.

CANDIDATES FOR MEMBERSHIP.

The following were nominated: Drs. Charles S. Turnbull, of Philadelphia; Miles Standish, of Boston; J. L. Thompson, of Indianapolis; W. T. Bacon, of Hartford; Stephen D. Ritchie, of Washington; and John Van Duyn, of Syracuse.

NEW MEMBERS.

The following were elected: Drs. B. E. Fryer, U. S. A., Fort Leavenworth, Kansas; J. A. Andrews, of Clifton, Staten Island; L. Webster Fox, of Philadelphia; J. A. Lippincott, of Pittsburg; J. L. Minor, of New York; and E. E. Holt, of Portland, Me.

INVITED GUESTS.

The following were invited to attend the sessions of the Society: Drs. T. Y. Sutphen, of Newark, N. J.; R. H. Johnston, of Philadelphia; Miles Standish, of Boston; and Swann M. Burnett, of Washington.

The Secretary, Dr. R. H. Derby, of New York, read the resignation of Dr. Thomas G. Morton, of Philadelphia, which was accepted.

INFLUENCE ON REFRACTION OF FOUR YEARS OF COLLEGE LIFE; ILLUSTRATED BY STATISTICS OF THE LAST FOUR CLASSES GRADUATED FROM AMHERST COLLEGE.

A paper on the above subject, sent by **DR. HASKET DERBY**, of Boston, was read by Dr. Miles Standish, of Boston.

The author had been able in 254 instances to trace the refraction through the whole term of four years. The examinations were all personally conducted with glasses, and in the majority of the cases, certainly in all doubtful ones, with the ophthalmoscope. The results given are those obtained by glasses. The use of atropine was entirely impracticable, as the students could not have been allowed even temporarily to be disabled from the active prosecution of their studies. Dr. Derby followed the example of Emmet and Loring in stating degrees of emmetropia as slight as 0.5 D., and included nothing less. The average age of those examined was, at entrance, nineteen years; at graduation, twenty-three. The number of cases was small, it is true, but it is one of the few attempts yet recorded to trace the movement of refraction among the more highly educated during this particular period of life and for a continuous term of years.

The general results were: hypermetropia at entrance 39, at graduation 47; myopia at entrance 90, at graduation 120; emmetropia at entrance 125, at graduation 87.

Analyzing the ametropia he found under the head of manifest hypermetropia, of which there were 39 cases at entrance, 1 changed to myopia, 2 diminished, 27 remained stationary, and 9 increased in amount.

Of the myopia there were 90 cases; 32 remained stationary, 58 increased in amount.

Emmetropia. The observations concerning this class possessed peculiar interest, the results somewhat militating against theories that have found general acceptance. There were at the time of entrance, 125 cases of emmetropia; of these 86 remained emmetropic, 10 developed hypermetropia, and 29 developed myopia. The average age of those thus developing myopia was very nearly nineteen at entrance, twenty-three at graduation. The average myopia developed amounted to nearly 1 D (0.982).

So far as these figures go, they tend to show, first, a large amount of myopia even in this country among the educated classes. The author said it was difficult to compare Dr. Loring's figures with his own, because Dr. L.'s statistics were based upon observations made between the ages of six and twenty-one, and his observations were made between the ages of eighteen and twenty-three; but all researches at the latter age go to prove that at least one-half, or very nearly, of the educated community is myopic in this as well as in other countries. Moreover, contrary to the impressions so long entertained, myopia may be acquired at or near twenty years from the same causes that produce it at an earlier age, and it may continue to progress until the course of study is completed.

The paper was discussed by Drs. Webster and Mittendorf, of New York; Dr. Gruening, of New York, who directed special attention to the use of the term dioptric, urging that some uniform mode of spelling be adopted; Drs. Carmalt, of New Haven; Little, of Philadelphia; and Hutchinson, of Utica.

SOME IMPROVEMENTS IN INSTRUMENTS AND APPLIANCES FOR CATARACT OPERATIONS.

DR. RUSSELL MURDOCH, of Baltimore, read a paper with the above title. He exhibited an ophthalmostat, or a self-holding eye-forceps, and an eye-speculum, which were modified from those exhibited to the Society in 1874. The distinguishing features of the speculum were absence of spring and set screw. The change in the ophthalmostat was so that it seized the conjunctiva in a vertical fold, and rotated the eyeball without dragging it, and the substitution of three little hooks for one pair, which secured greater steadiness.

The new instruments consisted, first, in the combination of Graefe's knife end to end with Wecker's scissors. Second, a combination of iris-forceps with the cystitome and shell spoon.

The advantages claimed for these instruments were, that an assistant is dispensed with, and that seven instruments are reduced to three in performing the modified linear extraction of cataract.

Dr. Murdoch also exhibited a bandage which could be quickly made and easily applied.

DR. GRUENING, of New York, thought that outside of the limits of civilization such complicated instruments might be useful, but that within the limits they should be discarded entirely, and that a cataract operation should not be undertaken without an assistant. Concerning the bandage, he said an ordinary flannel bandage could not be replaced by anything which had yet been brought forward. No bandage can produce the pressure that can be applied by the use of the flannel roller. It is necessary to immobilize the eye, and this cannot be done by any substitute for the ordinary flannel bandage.

The **PRESIDENT** remarked that he had had some experience in the use of the little forceps in fixation, and had long ago discarded the instrument because it did not give so much control over the eye as one might imagine. He had reached the conclusion that the operator's hand should guide the forceps.

DR. MURDOCH said he was well aware the gentlemen in New York could obtain an assistant at any time, but he thought there were occasions outside where it was impossible to secure an assistant, and that the instrument had been devised especially to meet such emergencies.

DR. THEOBALD, of Baltimore, believed that the eye could not be immobilized by any bandage whatever which was at all permissible, and that there was a decided objection to the long flannel bandage, especially during hot weather.

Dr. Gruening said he would not insist upon the flannel bandage, but that he would insist upon the long bandage, and of late he had used gauze, dipping it into water before applying it. He believed that the eye could be perfectly immobilized if the bandage were properly applied. The first thing to be done is to fill up the orbital depression, so that when the hand is placed over it the brow and the bridge of the nose are not felt, but the hand rests entirely upon the pad, and upon that pad pressure with the bandage can be made which will render the eye entirely immobile.

Dr. Theobald thought if Dr. Gruening would apply the bandage in the manner described to his own eye, he would find that the eyeball had not been rendered immobile.

Dr. Henry S. Schell, of Philadelphia, reported a case of

TUBERCLE OF THE IRIS.

The patient was a boy, nine years of age, who applied for treatment at the Will's Eye Hospital, August 29, 1881. The left eye had been painful for four days, and exhibited the general signs of ordinary plastic iritis. Atropine and mercurial ointment were prescribed. On the 16th of September, no effect had been produced by the treatment. In the latter part of October, the boy came to the Children's Hospital, suffering from well-marked coxalgia in the second stage. There was a distinct history of phthisis on the mother's side. The left eye was still somewhat painful, the pupil was immobile, and there was a ring of circumscribed injection, and projecting from the nasal side of the pupillary margin was a small, yellowish-white nodule, the size of a pin's head, and tinged with pink. This nodule gradually increased in size; the hip-joint disease progressed. The eye was enucleated, and was examined by Dr. G. B. Lawrason, of New Orleans, who reported that it consisted of two or three tubercular masses embedded in inflammatory product. The tubercles seemed to have developed in the organized inflammatory product, which nearly filled the anterior and posterior chambers.

The President said that within the last year a case had been under observation in New York which illustrated the difficulties in diagnosis. The patient was four years of age, and the gross appearances presented by the eye were absolutely indistinguishable from a glaucomatous condition or a metastatic choroiditis. The patient continued under observation for several weeks without much progress in the disease. The eye was then enucleated, and tubercular disease was found to be the true nature of the lesion. It was felt at the time by those who examined the patient that, in some cases, the differential diagnosis between glaucoma and tubercular disease is impossible.

TUBERCULOSIS OF THE CILIARY MUSCLE AND IRIS.

Dr. O. F. Wadsworth, of Boston, reported a case of the above character, occurring in a girl three and a half years old. Dr. Hasket Derby, of Boston, saw the patient when the process had lasted two weeks, and regarded it as a case of kerato-iritis. The pupil contracted and remained so in spite of atropia. The cornea was hazy: the lids were natural. Afterwards, when Dr. Wadsworth saw the patient, the cornea was hazy, the conjunctiva was moderately congested, there was no marked ciliary congestion, there was good anterior chamber, and the pupil was of good size. The patient died about six months afterwards. The eye, after it was removed, contained a mass of about six millimetres in thickness, the vitreous was replaced by serous fluid, and there was nothing of the lens to be seen. The iris and choroid were in place, and behind the mass. Microscopic examination, made by Dr. Ernst, of Boston, revealed that the growth was tubercular in character, and he was also able to demonstrate the presence of bacilli. There was no evidence of pulmonary disease. It was learned late in the history of the case that the father and the father's brother died of phthisis, and that other members were subject to bronchial attacks, so called.

The paper was discussed by Drs. Prout, of Brooklyn, and Webster, of New York.

Dr. S. F. McFarland, of Oxford, New York, read a paper on

A PERSONAL EXPERIENCE WITH PRISMATIC GLASSES.

During his boyhood he had slight divergence occurring and disappearing at times, although seldom sufficient to attract attention. Still he had the full use of his eyes, could judge of distance as well as others, and was even expert in the sports of youth requiring binocular vision. He had no inconvenience during his studies, always enjoying the greatest comfort during the most severe and protracted application. During the autumn of 1862, he contracted typho-malarial fever in the army, and after recovering from this he found that he had lost the full and comfortable use of his eyes, which continued with the usual pain and annoyance attending a futile effort to use both eyes in conjunction, and he was compelled finally to discontinue reading almost entirely until, in January, 1866, he consulted Dr. H. D. Noyes, who gave him plain prisms of seven degrees each, bases inwards, for distance, and eight degrees each with plus thirty-six spherical for reading. At that time he had been nearly three years unable to obtain binocular vision even for a moment, but at once he was able to see distinctly. He has never discontinued their use. They have been varied from time to time, but he has always adhered to the prisms. He suffers the inconvenience that he cannot maintain continued binocular vision, but can obtain and retain it long enough for an iridectomy, or the extraction of a cataract, and even during very protracted operations, although at the expense of pain and very distressing lassitude following the effort. Without the prism he could not do these things, inasmuch as slight differences in distance would not be appreciable. With bifocal sphero-prismatic glasses he is able to do all his office work without changing, and with a reasonable amount of comfort.

Dr. R. J. McKay, of Wilmington, Del., said that a music teacher came to him in September, 1879, who while standing directly in front of his class and moving his eyes from right to left extremely without moving his body, weakened the external recti. Dr. McKay ordered prisms with the bases external, which the patient had worn ever since with comfort, for distance only.

Dr. O. F. Wadsworth, of Boston, then read a paper

ON THE APPARENT CURVATURE OF SURFACE PRODUCED BY PRISMS.

The phenomenon is very familiar that when we look through prisms with the bases inward with a plane surface, the surface appears convex, and with the bases outward, the surface appears concave. He had not met with any exception to this phenomenon, and the communication was intended to explain it, and was the theory which had been worked out by Dr. Pierce. It was illustrated with diagrams.

Dr. S. W. Burnett, of Washington, on invitation presented a specimen of

TUBERCLE OF THE CHOROID,

accompanied with the clinical history of the case, which occurred in a colored girl, fifteen years of age.

Dr. J. A. Spaulding, of Portland, Me., then read a paper in which he reported a case of

SYMPATHETIC NEURO-RETINITIS.

The author first referred to the able works of Mauthner and Kneis, whose views are so diametrically opposed, the latter believing that the so-called cases of sympathetic neuro-retinitis are open widely to criticism. It seemed desirable, therefore, to publish and thus to offer to careful criticism every case of apparent sympathetic inflammation of the retina and optic nerve (either alone or conjoined), and above all does this appear necessary when we have, as at present, to offer one in which, so far as accurate and repeated examinations have availed, the retina and optic papillæ of one eye underwent inflammation after an injury to its mate, while at no time from the beginning of the case were there ever any visible signs of inflammation of any portion of the uveal tract. The patient was a Danish woman, fifty-six years of age, and healthy in every respect. On the 6th of January, 1883, she was struck in the eye by the horn of a cow, which rendered her at once and forever totally blind in that eye. The patient saw a flash of light, and then the sight was gone. Eleven weeks after the injury to the right eye, the patient, much reduced in health on account of the pain and irritation in the right eye and its neighborhood, came to Dr. Spaulding for consultation on the 30th of March. About four weeks after first seen, the right eye was enucleated on account of the excessive pain from which the patient was suffering. The operation was followed by excessive hemorrhage, which could not be checked by pressure or hot water, and only ceased after ligature of the artery deep in the orbit, and of a second one, which appeared to spring from a band of connective tissue uniting the globe and upper eyelid. The case subsequently progressed favorably, and the patient was sent home. No medicinal treatment was adopted. The result appears to justify the opinion of the truly sympathetic nature of the neuro-retinitis in the left eye, for the sight gradually returned to the remaining eye. The pain in the head disappeared with considerable rapidity. July 14, 1883, examination with the ophthalmoscope revealed normal left eye, vision $\frac{20}{30}$. The enucleated eye was lost. The presence of this neuro-retinitis with total loss of vision in the eye five weeks after an injury to the other and without any other visible or possible cause, such as idiopathic iritis, syphilis, cerebral lesion, etc., indicates the sympathetic nature of the disease. Iritis was excluded in any form as the possible cause of the difficulty in the left eye.

Dr. Webster, of New York, said he had reported two cases of sympathetic neuro-retinitis in which he enucleated the eye giving rise to the trouble, and with excellent results. The neuro-retinitis subsided, and the eye recovered with much better vision than existed before the operation was performed.

Dr. Prout, of Brooklyn, said, concerning the hemorrhage in Dr. Spaulding's case, that in one instance, after resorting to various methods unsuccessfully, he arrested the hemorrhage by digital pressure with the finger in the orbit.

Dr. Mittendorf, of New York, had employed sponge pressure, that is, applying a good-sized, soft, moist sponge over the orbit, and securing it with a roller-bandage after enucleation — to be worn for twenty-four hours, then changed and worn for the next twenty-four hours; and he had never experienced any trouble from hemorrhage or from infiltration of the lids or the orbital tissues.

Dr. H. W. Williams, of Boston, said he had never had any difficulty in arresting hemorrhage by means of the sponge-tent, and was unable to see how it is possible for hemorrhage to go on if the orbit was properly plugged in that way. However, since he had adopted the circular suture of Bowman, he did not recollect having had a case where it was necessary to apply the sponge-tent.

Dr. Prout thought the removal of the tent would be exceedingly painful.

Dr. Williams remarked that the patients did not like it at all, but the pain could be reduced to its minimum by removing the sponge very quickly.

Dr. Dyer, of Newport, while in charge of an army ward, had between 225 and 250 cases of enucleation, and in not a single one did he experience any annoyance from hemorrhage. He always used a large sponge from which ice-water was gently squeezed into the orbit, rarely for more than ten minutes, and afterwards applied a double thickness of linen, covering it with one thickness of bandage.

Dr. Green, of St. Louis, referred to a case in which ice-water and digital pressure had been employed without success, and finally he tamponed the orbital cavity with a narrow strip of linen, and made external pressure with a bandage which controlled the hemorrhage. The tampon was allowed to remain twenty-four hours, when it was removed without difficulty by a process of unravelling, as it were. He subsequently learned that the patient had a hemorrhagic diathesis.

Dr. Knapp, of New York, referred to a procedure for *avoiding hemorrhage* after enucleation, and it was to keep close to the sclerotic. If this precaution is observed, there will be very little danger from hemorrhage. The most profuse hemorrhage occurs when the optic nerve is cut, because we are likely to go into the natural cavernous tissue of the organ; but the division can be made without undue loss of blood by pressing the speculum into the orbit, and allowing the eyeball to pop out, as it were, which will facilitate the division of the nerve and removal of the ball very materially.

The President had never had but one case of serious hemorrhage, which required digital pressure. He had had one case of enucleation of the eyeball for a tumor in the antrum, and in which the bleeding was so profuse that it was necessary to tampon the cavity with the ordinary kite-tail tampon, made of pledgets of lint. The tampon was effectual, and was readily removed.

The paper was further discussed by Drs. W. W. Seely, of Cincinnati, and F. Buller, of Montreal, Canada.

Dr. David Webster, of New York, then reported

THIRTY-FIVE CASES OF CATARACT EXTRACTION.

They included all the cases which he had had, good and bad, from the beginning, and all the operations were performed at the Manhattan Eye and Ear Hospital. A brief clinical history of several of the most interesting cases was given. Thirty-one different patients were operated upon: males, 20; females, 11. Their ages ranged from 30 to 83 years. Under 40 years of age, there were 2; between 40 and 50, 3; between 50 and 60, 9; between 60 and 70, 9; between 70 and 80, 8; above 80, 2. Twenty-eight eyes were operated upon while the patient was under ether. Of these, 24 were successes; 2 partial successes; and 3 failures. Seven eyes were operated upon without the use of an anæsthetic; 5 of these did well, and 2 were failures. The method of operation known as "Von Graefe's modified," was used in all cases in which it was practicable; where a preliminary iridectomy was done, the incision for the extraction of the lens was made in the same position as in the other cases. Preliminary iridectomy was performed in 6 cases; 4 by himself, and 2 by another surgeon. In only one case of the thirty-five was there loss of vitreous, and this was the only case in which the scoop was introduced into the eye for removing the lens; and in three cases there was dislocation of the lens into the anterior chamber during the preliminary iridectomy. In one case, irido-dialysis was produced during the operation; and in one case the iris fell before the knife, on account of premature escape of the aqueous, and was cut through. In all these cases in which accidents occurred during the operation, the eyes recovered with good sight. In three cases the cornea was thin and flaccid, and became wrinkled or collapsed after evacuation of the lens.

In 2 cases there was hemorrhage from the iris immediately following the iridectomy. In 4 cases a considerable quantity of soft lens matter was left in the eye. In 1 case some inflammatory reaction was noted during recovery. This eye did well. In 4 cases there was iritis. Sloughing of the cornea occurred in 1 case, panophthalmitis in 2 cases, and in 1 there was iridocyclitis with sympathetic inflammation of the fellow eye. A second iridectomy was performed in 2 cases, in both resulting in a clear pupil, but in one failing to restore sight on account of deeper disease. Keratonyxis for pupillary membranes was performed in 7 cases, and in all successfully.

The successes, taking the results of all the cases, complicated and uncomplicated, were 27; partial successes, 2; failures, 6. Dr. Webster believed, however, in justice to himself and cataract statistics, he ought to exclude the cases of extensive corneal opacity, a case of detachment of the retina, and one other case with vitreous and perhaps deeper complications. The figures would then stand, successes, 27; partial successes, 1; failures, 2. By success he meant the standard adopted by Dr. Knapp, namely, v. $\frac{22}{200}$; partial success, ability to count fingers; failures, nothing more than perception of light.

The paper was discussed by Drs. Heyl and Strawbridge, of Philadelphia; Theobald, of Baltimore; and Carmalt, of New Haven.

Dr. W. W. Seely, of Cincinnati, then read a paper entitled

NOTES ON OCULAR THERAPEUTICS.

He directed attention, first, to the use of yellow oxide of mercury in external ocular troubles. Ten grains to the ounce of the vehicle is the best for all purposes. The less bichloride the preparation contains the less pain produced by its application. A practical point with regard to the use of yellow oxide and vaseline in conjunctival affections where there is such profusion of tears as to wash the salve out, was to substitute eserine or the bichloride in solution, to contract the bloodvessels. The strength of the bichloride solution that seems to answer every purpose is one grain to sixteen ounces of water. Such a solution is entirely painless, and has often in his hands set aside an acute catarrhal conjunctivitis of a violent type, after from one to three or four thorough drenchings of the conjunctiva. In corneal affections he uses a four-grain solution of eserine *once a day*, and believes that it acts altogether better than more frequent applications, either of the same or of a weaker solution. This remark applies to all classes of cases.

For the reduction of intra-ocular tension, eserine has for him done away entirely with paracentesis.

Every one has met with cases of iritis in which atropia does not seem to act promptly and satisfactorily, possibly *because of the extreme vascularity of the iris.* In such cases, instead of making paracentesis, and extracting blood, he instils once a day a few drops of a four-grain solution of eserine. The habit of instilling eserine once a day in iritic cases has become a routine practice with him, the patient at the same time using the mydriatic in the ordinary manner. In more than one case had he seen adhesions let go after the combined use of a myotic and mydriatic that had resisted the latter alone. Iritis is the only disease in which he employs a mydriatic as a fundamental remedy.

Eserine is the remedy *par excellence* in corneal affections. In cases in which mydriasis is necessary, the latter can be produced perfectly and still the satisfactory effects of the myotic be maintained. This is illustrated in suppurative inflammation after cataract operations, formerly so unsuccessfully treated by heat and atropine.

Dr. McKay, of Wilmington, Del., had used yellow oxide of mercury, with very favorable results in conjunctival troubles.

Dr. Gruening, of New York, said the alternate use of mydriatics and myotics for breaking up adhesions was not entirely new; he had resorted to this method as long ago as 1868. He regarded the use of eserine in iritis as an extremely dangerous practice.

Dr. Knapp, of New York, thought the alternating use of eserine and atropine was advantageous in some forms of iritis, especially the serous variety. Again, where there is increase of pressure which produces intense pain, as in certain cases of glaucoma, the pain is considerably relieved by one drop of eserine. In serous iritis the pressure is sometimes intense, and he thought that eserine could be so regulated as to prevent the noxious effects of the drug.

Dr. Seely said he did not speak of the alternate use of eserine and atropine, but wished simply to speak of the use of eserine *once a day* for the purpose of contracting the "bloodvessels," of course, maintaining mydriasis by atropine. He had never seen a case in which eserine had produced iritis.

The paper was further discussed by Dr. Kipp, of Newark, Dr. Knapp, and Dr. McKay.

The Society then adjourned, to meet at 8 P. M.

Evening Session.

The Society was called to order by the President.

The minutes of the morning session were read and approved.

Dr. W. F. Mittendorf, of New York, then read a paper on

THE TREATMENT OF DETACHMENT OF THE RETINA.

During the last three years, he had treated several very extensive detachments of the retina, occurring in patients that had only one useful eye, the other being entirely blind or absent. Although no new remedy or new method had been used, it was the combination of the different plans devised for the treatment of this affection, and the mode of administering the remedies that had led to the success. After briefly referring to the causes of detachment of the retina, the writer stated that the object of the treatment must be, (1) to keep the eye as free as possible from all irritating influences, which is best done by closing both eyes, or by putting the patient into a dark room; (2) to keep the eye as quiet as possible, and to avoid all accommodative efforts, and for this purpose the eye must be kept under the influence of a mydriatic; (3) to place the absorbents in the most favorable condition; this is accomplished by means of a pressure-bandage, and he had found elastic pressure, procured by means of a rubber bandage, to be of the greatest assistance; (4) to hasten the absorption of the effused fluid if this be the cause of the detachment—this can be accomplished by the use of jaborandi or pilocarpine. He had given a hypodermic injection of one-fourth to one-sixth of a grain of pilocarpine early in the morning, and then kept up the diaphoresis by the use of an infusion of jaborandi leaves, from forty grains to one drachm to twelve ounces of water, administered in wine-glass doses during the afternoon and evening. This treatment should be kept up for three or four weeks. He had not seen a single case in which the remedy, administered in this way, had to be discontinued on account of unpleasant symptoms.

If the detachment complicates a specific choroiditis, or if it follows a serous iritis demanding specific treatment, this may be used at the same time with the other remedies mentioned. In these cases the disease yields, as a rule, sooner than in other cases, and it will not be necessary to push the pilocarpine to so great an extent.

Dr. Mittendorf then reported in detail three cases, all of which were successfully treated. They tended to show, *First*, That in marked detachment of the retina the energetic use of jaborandi and pilocarpine will do good, especially if the patient can be kept under the influence of the drug during the entire day and for a period ranging from twenty to thirty days; *Second*, That the elastic pressure-bandage must be used at the same time; *Third*, That the patients must be kept upon the back most of the time; and *Fourth*, That the use of atropia, which is employed without causing any inconvenience to the patient, should likewise not be neglected.

The paper was discussed by Drs. Gruening, of New York, Little, of Philadelphia, Andrews, of Clifton, Staten Island, Webster, of New York, Theobald, of Baltimore.

Dr. Spaulding, of Portland, Maine, spoke of the operative treatment in these cases. He referred to a suggestion made by Mooren, that an attempt be made to remove the effusion by means of the hypodermic syringe. Having a case on hand, he tried the operation. Although he succeeded in removing a considerable quantity of the subretinal effusion, there was not much improvement except temporarily. He suggested that the method might be cultivated by placing a piece of rubber tubing between the needle and the tip of the nozzle; thus making an instrument somewhat similar to that used in the treatment of soft cataract. At least, he thought that some form of aspiration might be made applicable in these cases.

Dr. William S. Little, of Philadelphia, then reported two cases of

CONGENITAL ECTOPIA LENTIS: ONE SYMMETRICAL, THE OTHER NON-SYMMETRICAL.

The first case occurred in a man, twenty-three years of age. The non-symmetrical position of the lenses in this case was of interest, and the question arose as to what influence glasses which the patient had worn might have had in producing divergence in the left eye which is now going on, the right eye doing the work. The immunity for three years, and freedom from trouble, favored strongly the opinion that the glasses had not entered as a factor in the etiology of the divergence.

A sketch of a case by Dr. J. M. Taylor, which occurred in the practice of Dr. C. S. Turnbull, of Philadelphia, was also presented. The patient wore glasses with comfort for more than a year, when he was accidently killed.

The paper was discussed by Dr. Mittendorf, of New York, who related the history of a case.

Dr. George T. Stevens, of New York, then read a paper on

THE EMPLOYMENT OF NITROUS OXIDE AS AN ANÆSTHETIC IN OPHTHALMIC OPERATIONS.

He had employed it in operations about the nasal duct, iridectomy, cystotomy, and similar short operations, and believed that it possessed several advantages, such as being less dangerous, unattended with nausea and other symptoms which are incident to the use of ether, and that it demanded for its administration far less trouble than ether or chloroform. He thought it doubtful if it could be relied upon for cataract operations.

The President had employed it more or less during the last ten years, and stated that the nitrous oxide had the advantages claimed for it to a certain extent. He had, however, noticed two features: first, there is likely to be a good deal of rigidity on the part of the patient in some cases. Second, it is liable to be attended with a great deal of venous congestion which gives rise to considerable hemorrhage in wounds about the eye.

Dr. R. H. Derby, of New York, had employed the nitrous oxide preliminary to prolonged anæsthesia with ether, and with very gratifying results.

Dr. Buller, of Montreal, said that for some time nitrous oxide was used in the hospital in London, but with unsatisfactory results. He had resorted to the primary anæsthesia produced by ether with exceedingly gratifying results.

Dr. Albert G. Heyl, of Philadelphia, then presented

A CONTRIBUTION TO THE OPERATIVE TREATMENT OF GLAUCOMA.

After giving the ordinary method of treatment employed, and detailing the history of a case which had been under his observation, and in which he had resorted to operative treatment, he recommended the following plan as a modification of that which he had employed: It was to ligate the frontal artery and then open the supra-orbital artery and allow a few ounces of blood to escape, and then close the vessel with a ligature. He discussed at considerable length the physiological basis of the operation, and said that he wished simply to place upon record a piece of clinical experience which he thought would shed some light upon the condition of acute glaucoma. The patient upon whom he operated was suffering from chronic glaucoma when he saw him, but the case had been one of acute glaucoma in its inception.

Dr. Webster, of New York, recalled a case in which a California surgeon advocated ligature of the carotid early for glaucoma; performed the operation once and cured his patient.

The President stated that the natural history of acute glaucoma must be considered before deciding with reference to the influence produced by any modification of the circulation by operation.

Dr. Seely, of Cincinnati, said it should be borne in mind that the influence of the California operation was directly the reverse of that suggested by Dr. Heyl.

Dr. Gustavus Hay, of Boston, then read a communication on the *Astigmatic Pencil*, which was discussed by Dr. Knapp, of New York.

Dr. Charles J. Kipp, of Newark, New Jersey, then reported cases of

SARCOMA OF THE CHOROID, WITH INTERESTING CLINICAL FEATURES.

Case I. was that of a woman, seventy years of age, first seen six weeks before the eye was removed. Sight had been lost only a few months. There was no pain, nor was there any sign of inflammation of the outer parts of the eye. In the outer half of the eye, behind the lens, was seen a large white mass, of rounded form, on the surface of which were numerous hemorrhages. The retina was detached in the inner half. The diagnosis of intra-ocular tumor was made, and enucleation advised. Four weeks later, symptoms of secondary glaucoma developed, and after the patient had endured the pain for two weeks, she consented to have the eye removed. The operation was not attended by accident, and the wound healed rapidly. On examination of the eye, a large dark tumor was found which nearly filled the eye, and which had started from the outer half of the choroid; it was covered in part by the retina, and extended anteriorly to and involved the ciliary body; it consisted of spindle-shaped cells, and contained much pigment.

Case II. was that of a man, thirty-four years of age, who was first seen seventeen months before enucleation was performed. At that time, the anterior parts of the right eye were apparently quite healthy. On the nasal side of the eye, a semi-globular protuberance was seen to project nearly to the visual axis; upwards and downwards it extended apparently nearly to the vertical meridian; anteriorly, it did not reach quite to the ciliary processes. The tumor was of a greenish-red color, and was covered by transparent retina; its surface was smooth, and its vessels were distinctly visible. The retina was slightly detached at the base of the tumor, but nowhere else. The optic disk was very pale, and its margin slightly blurred. The other parts of the choroid and retina presented nothing abnormal, except an atrophic patch in the choroid below the disk. Tension was normal; visual field defective in outer half, and much contracted, upwards, downwards, and inwards. The other eye showed numerous atrophic spots in the choroid, and pigment deposits in the retina. From the patient it was learned that twenty years ago he had had a severe attack of some eye disease, which seriously impaired the left, and somewhat the right eye—the one now containing the tumor. Since then, his sight remained the same until two months ago, when he noticed that his right eye failed. The disease from which he suffered twenty years ago was doubtless a choroido-retinitis, the results of which were plainly visible in both eyes. Seventeen months later, the patient was seen again. There was now great pain, and the eye presented the usual symptoms of secondary glaucoma. The eye was enucleated, and the wound healed rapidly. On examination, the tumor was found to have started from the choroid in the region of the macula lutea. It was very large. The retina was detached completely. The microscopical examination of the tumor showed it to be a spindle-celled melano-sarcoma.

Case III. was that of a woman forty-one years of age, who was first seen fifteen months before the eye was enucleated. At the first examination nothing abnormal except a prominence and opacity of the retina at the macular region was found. The retina for a space of about two diameters of the optic disk was grayish, and the retinal veins here were dark in color. The summit of the prominence was best seen with a + 4 dioptric glass. The retina was not detached, neither over the prominence nor anywhere else. The eye was as it had been, practically blind for some months. The case was seen from time to time for two months, during which period no marked change in the eye was observed. Thirteen months later she was seen again. She had secondary glaucoma, which had come on about two weeks before. The eye was enucleated and the wound healed rapidly. On examination a large tumor of irregular form and with very broad base was found, which had originated in the region of the macula lutea, and from there spread over the optic nerve entrance.

Case IV. A woman, forty-two years old. Sarcoma of the ciliary body and iris. Secondary glaucoma was present when the patient was first seen. The tumor did not extend to the choroid, and the microscopic examination showed that it had probably originated in the connective tissue of the ciliary muscle. It was composed of spindle cells, and contained much pigment. Five years after the operation there was no relapse.

OSSIFICATION OF THE CHOROID.

DR. KIPP also read a paper describing a case of very extensive ossification of the choroid occurring in a young man, who, when first seen ten years ago, had a chalky cataract to which the pupil was everywhere adherent. As there were at that time no symptoms of irritation of the eye, and the case was hopeless so far as sight was concerned, no treatment was advised. The boy had been born with the cataract, according to the mother's statement. Ten years afterwards the eye became painful, and presented when then seen the appearance of irido-cyclitis. The eye was removed, and, on examination, the osseous plate lined the inner side of the choroid as far as the ciliary processes.

The communication was discussed by Dr. Howe, of Buffalo, who presented a specimen; the President, and Drs. Mittendorf and Webster, of New York.

DR. S. THEOBALD, of Baltimore, then read a paper on

TRITURATION OF THE CORTEX.

He reported two cases in which this operation was practised in connection with preliminary iridectomy to hasten the development of slowly ripening cataract. The operation consists in a kneading or bruising of the anterior cortical layers of the lens by pressure on the cornea after iridectomy and while the anterior chamber is still empty, and in accordance with the suggestion put forth by Prof. Förster, of Breslau. The trituration was done with the angle of the strabismus-hook, and in the first was imperfectly performed. In the second case the operation was performed with the smooth end of the Bowman's tortoise-shell cataract-spoon, which seemed better adapted to the purpose. In the first, the operation was followed by but slight change in the condition of the lens. In the second case, however, a very rapid development of the cataract ensued. In each case there occurred a sufficient amount of iritis to cause slight but persistent adhesions between the iris and lens at the pupillary angle of the coloboma; and in the second case it was found by oblique examination, a day or two after the operation, that near the cut edges of the iris the pigment layer had been detached from the muscular coat in a manner which was quite peculiar. That the iris should be more or less bruised, as well as the lens, however carefully the trituration be performed, appears unavoidable, and the risk of exciting inflammation in this manner seems the chief objection to the procedure. It would appear, however, that Prof. Förster has not had serious trouble from this source, as he makes no special reference to it in his paper.

DR. GRUENING, of New York, had performed the operation twice during the last year. In the first he performed a large iridectomy upward, and with the angle of the strabismus-hook treated the lens in the *area of the pupil only*. No iritis followed, and the lens became completely opaque within one week. He extracted it three weeks later, with very good results. In the second case he performed iridectomy upward, and again treated the lens only in the area of the pupil, and in four days the lens was completely opaque. He thought there were certainly cases in which the operation was indicated, and was attended with great gain.

DR. KIPP said that he performed the operation some time ago. The lens became opaque, and four or five days afterward it cleared up again.

DR. MITTENDORF, of New York, thought the operation was indicated, especially in certain cases in which two cataracts were formed, and his experience in the operation had been equally favorable with that reported by Dr. Gruening.

Dr. Knapp, of New York, had performed the operation once, but it did not seem to hasten the ripening of the cataract.

Dr. Wadsworth, of Boston, had performed the operation once in a patient eight years ago. There seemed to be no effect at all so far as ripening of the cataract was concerned. He thought that probably in some cases maturity of the cataract might be hastened very much by the method, while in other cases probably the result would be very slight.

The President had operated eight times, and in seven cases had subsequently performed extraction. In one case marked iritis developed, but did not interfere with the subsequent recovery, and extraction was entirely satisfactory. He hoped to make a communication upon the subject which would embrace the history of all his cases with remarks.

Dr. Gruening remarked that by the area of the pupil he meant the new pupil, including the coloboma.

The paper was further discussed by Drs. Webster, of New York; Fox, of Philadelphia; Dyer, of Newport; and Theobald.

Thursday, July 19th, Second Day.

The Society was called to order at 9 A.M. by the President.

The Treasurer moved that the annual assessment be five dollars. Adopted.

VASELINE CERATE A CONVENIENT BASIS FOR OINTMENTS INTENDED FOR APPLICATIONS TO THE EYELIDS.

Dr. Theobald, of Baltimore, read a brief paper on the above subject, in which he stated that he had been using with much satisfaction for several months, both in private and in hospital practice, as a basis for ointments intended for application to the eyelids, a cerate made of yellow wax and vaseline, which is prepared without difficulty by melting the wax and vaseline together by gentle heat, and stirring the mixture until it hardens, combining one part of yellow wax with four of vaseline, which proportion gives the ointment sufficient firmness, except, perhaps, in very hot weather, when the proportion of wax may be increased to one to three. Dr. Theobald also exhibited a specimen of ointment of the yellow oxide of mercury, containing two grains to one drachm of vaseline cerate, which, though prepared nearly four months since and kept with no special care, still retained its bright yellow color, and had undergone no appreciable change. He had been told that cerates prepared by vaseline were in use, but was not aware that attention had been called to the convenience of employing them in the manner suggested.

Dr. H. Knapp, of New York, then read a paper in which he reported a case of

BLINDNESS FROM RETINAL THROMBUS IN CONSEQUENCE OF FACIAL ERYSIPELAS.

There is on record a certain number of cases of blindness in consequence of facial erysipelas. Their symptoms vary considerably. There is lack of ophthalmoscopic examinations during the first stage of the affection. Not long ago Dr. Knapp had the rare opportunity of observing such a case almost from the beginning to the end. Mr. E. F., forty years of age, had lived in the tropics, had had syphilis with secondary and tertiary symptoms, which were aggravated, when his business called him north. On the 2d of March, 1883, while in New York, he had an attack of erysipelas, which began upon the nose, and proceeded to the pharynx, cheeks, and orbits. The patient was under the care of Drs. Gulecke and Schottke, who kindly allowed Dr. Knapp to publish the case. The erysipelas progressed, and on March 28th he was totally blind in both eyes.

Reserving a detailed discussion of this case for publication in the *Archives of Ophthalmology*, Dr. Knapp restricted himself to the following remarks:

First. The blindness was produced by compression of the central retinal arteries and subsequent thrombosis of the retinal veins, both having been directly observed with the ophthalmoscope one day after the occurrence of the rapid, almost sudden, loss of sight.

Second. The ophthalmoscopic appearances observed from beginning to end showed no neuro-retinitis, but the successive stages of a thrombosis.

Third. The degrees of the swelling of the orbital tissue, or the establishment of collateral circulation from the choroid, permitted the return of a limited flow of blood into the retinal arteries, which, however, impeded by the blocked veins, led to renewed extravasation to the thrombosis and shrinkage of the arteries, and finally to atrophy of the optic nerve.

Fourth. Perivasculitis played no, or only an unimportant, part in the pathology of this case.

Fifth. The white segments in the veins and arteries were white thrombi and hypertrophy of the walls of the bloodvessels.

Sixth. The thrombus was present in all probability also in the orbital veins, but did not, as in other cases, extend to the cerebral sinuses.

The paper was discussed by **Dr. Kipp**, of Newark, who stated that in the cases in which he had seen the condition described by Dr. Knapp, the retina and its immediate vicinity was in a state of inflammation, or at least opaque, but not between the veins.

Dr. Knapp thought that the segments of the veins, becoming white, could be used as a diagnostic symptom of embolism.

The President had seen a case in which the process was confined more particularly to the optic nerve, with swelling and neuro-retinitis, and subsequent atrophy, and nearly absolute blindness.

Dr. Seely, of Cincinnati, had seen a case in which iodoform, used as a dressing, had produced facial erysipelas in three distinct instances.

Dr. Knapp felt certain that the iodoform had no unfavorable influence whatever in his cases.

Dr. W. H. Carmalt, of New Haven, Conn., read a paper on

CHANGES IN REFRACTION RESULTING FROM A BLOW.

R. A. S., twenty years of age, student in the sophomore class in Yale College, myopic since twelve years of age, consulted him on October 23, 1882, stating that, while practising in the gymnasium the day before, he had fallen violently forward, striking his right eye upon a bolt projecting from the floor. The blow was sufficiently severe to give rise to disturbance that obliged him to keep quiet for the remainder of the day and evening, neither going about nor studying; but at the time of his visit he felt quite well again, except with reference to his eye. Wearing his glasses habitually for all purposes of vision, near or far, he now felt an uncomfortable sensation in looking through his right glass, and could see much better at distance without it, better, indeed, than he remembered ever to have seen before without glasses; but, for all that, he had a very confused sensation when looking with both eyes either with or without glasses. Four months afterwards he was again consulted, when he found, on ophthalmoscopic examination, that there was no conus at the nerve, nor other evidence of retino-choroidal trouble. By oblique illumination, no opacity of the lens was detected. On the following day he saw, at Dr. Carmalt's suggestion, Dr. Loring, of New York, in consultation. To summarize the facts of this, to his knowledge, unique case, it seemed established that in a case of myopia of very considerable and nearly equal degrees in the two eyes, one was reduced by the impact of a blow to a condition of astigmatic myopia, which resolved itself finally into a cross astigmatism without any loss of acuity of vision or range of accommodation. After endeavoring to account for the mechanism of this change, five possibilities presented themselves: *First.* A change in the shape of the cornea. *Second.* A diminution or shortening of the axis of the globe. *Third.* A displacement or dislocation of the lens backward. *Fourth.* A change in the relative position or arrangement of the lenticular fibres. *Fifth.* A preëxisting spasm of accommodation, the tonicity of which had been released by the paralytic effect of the blow.

Dr. Carmalt excluded, as did also Dr. Loring, change in the length of the eyeball, also dislocation of the lens, also the previous existence of spasm of accommodation. The remaining alternative cannot be urged from any knowledge we have of such a condition having been positively determined. It is urged rather as a refuge. All the other explanations having been disproved or not being satisfactory, is it not possible that a sudden and violent impulse could have shaken and so displaced the lenticulate articulations of the lens fibres that they became fastened in a position to correspond to (or cause) the error of refraction indicated above?

The paper was discussed by Drs. Knapp, Noyes, Seely, Webster, Buller, McKay, and F. B. Loring.

DR. E. W. BARTLETT, of Milwaukee, Wis., then read a paper entitled

A FURTHER MODIFICATION IN CATARACT EXTRACTION.

The modification proposed is to make two preliminary iridectomies in certain difficult cases, one upwards and one downwards. Dr. Bartlett then reported two cases which illustrated the modification. The modification was suggested in difficult cases only; as when the eye is very prominent; when the iris does not react to atropine, or attachments have formed between the iris and capsule; when the other eye has been lost and the least amount of risk should be taken with the other eye; and when the patient is very infirm and danger from shock is very great; and when the cataract is maturing very slowly. In such cases this modification gives the patient a better chance of securing a certain amount of sight than the method of making the whole operation at one time.

DR. GRUENING, of New York, then read a paper entitled

BLEPHAROPLASTY ACCORDING TO THE ENGLISH METHOD.

A young man sustained an injury of the face by the explosion of a petroleum lamp. As a result of the mishap the integument of almost the whole forehead, the right temple, the right cheek and corresponding half of the nose was changed into dense cicatricial tissue. The upper lid was wholly everted and its free border attached to the supra-orbital margin. To correct the deformity, the lid was detached from the orbit, the neighboring tissues undermined, the deep scar exsected, the free border of both lids brought in apposition, and united by free sutures. The surface of the wound measured forty millimetres in the vertical, and fifty-five millimetres in the horizontal direction. In order to cover the defect, a flap was transplanted from the inner surface of the left arm and placed upon the wound. The flap was prepared according to Wolfe's suggestion, *i. e.*, deprived of its subcutaneous cellular and adipose tissue. After careful coaptation of the flap to the edges and the surface of the wound, goldbeater's skin and a bandage were used to maintain the flap in its position. No discoloration, no displacement of the flap ensued; it united firmly with the wound, and the ectropion was corrected. To-day, *i.e.*, nine months after the operation, the flap measures fifteen millimetres in the vertical, and thirty millimetres in the horizontal direction. The shrinkage took place during the first four weeks after the operation; no further shrinkage during the last eight months. The result is very satisfactory, and would not have been obtained by any other method.

The paper was discussed by Drs. Wadsworth, of Boston; Kipp, of Newark; and Andrews, of Staten Island.

DR. MCKAY, of Wilmington, then reported a case of

LOSS OF AN EYE FROM SEWER GAS AFTER EXTRACTION OF A CATARACT.

John H., a German, brewer, sixty-one years of age, was operated upon April 16, 1882, for senile cataract without an anæsthetic, by Graefe's method of linear extraction. The upward operation was performed satisfactorily, and without any accident whatever. He counted fingers immediately after the operation. The eye was covered with absorbent cotton and a light flannel pressure-bandage, without the further introduction of a mydriatic. Three and a half days after the operation, the bandage became somewhat loosened; this eye was examined, and atropia was introduced. The incision was closed; the cornea was clear; the papular field dark; and vision, tried for a moment, was very encouraging. The patient subsequently developed symptoms of some general disease; evidence of the contamination of the atmosphere by sewer gas was detected; and finally the eye was lost, as Dr. McKay believed, in consequence of the poisoning of the general system produced by this noxious agent.

DR. MCKAY also reported a case of

SYMPATHETIC NEURO-RETINITIS OCCURRING DURING PREGNANCY.

The patient was twenty-six years of age, and had been married ten months. In infancy she had scarlet fever, since which time the right eye had been weak. Five years ago the eye was treated for a painful inflammation by an oculist in Philadelphia, but during the last two years it had not annoyed her. When Dr. McKay saw the patient the eye was in a quiescent state of chronic irido-choroiditis with partially occluded pupil and dense opacity of the vitreous. She complained of her left eye, and reported that after a week's crocheting a sudden pain was felt in it while looking at a white wall. She was debilitated by malarial and pulmonary troubles, and was three months advanced in pregnancy. Ophthalmoscopic examination revealed hypermetropia and a faint opacity of the deep portion of the vitreous, with decided congestion of the optic disk and retina, and within two weeks the appearance of sympathetic neuro-retinitis was fully manifested, and vision was reduced to counting fingers six to eight inches in a dimly lighted room. After three months' treatment in a darkened room, with a dark bandage over her eyes, and the occasional use of a solution of atropia, to prevent iritic adhesions, inunctions of mercurial ointment to the temples, several leeches to the left temple, and a general sustaining and tonic treatment, she improved in general health, and the vitreous opacity, as well as the exudation of the optic nerve and retina, disappeared, and she recovered good vision. Her pregnancy, Dr. McKay thought, greatly and favorably modified the course of the sympathetic neuritis. The ophthalmoscopic appearances of retinitis albuminurica were looked for repeatedly, but were never found, and the fact of her vision not being again impaired whilst she had general anasarca, which developed later in the progress of the case, enabled him to regard it as a case of neuro-retinitis.

DR. L. HOWE, of Buffalo, then read a brief paper and presented a specimen which illustrated

THE DIFFICULTIES IN MAKING A DIFFERENTIAL DIAGNOSIS IN GLAUCOMA.

The patient was four months old. When first seen, at two months of age, a yellowish reflex was noticed in the interior of the eye which had been previously somewhat reddened, and vision, so far as could be determined, was much impaired. Increase of tension was scarcely perceptible, but after some hesitation it was regarded as plus one. After enucleation it was found that the entire vitreous had contracted into a small cone as a result of previous inflammation, and that the apex touched the retina, and had its interior filled with a semi-purulent yellowish substance.

DR. E. E. HOLT, of Portland, Me., then read a paper entitled

COMMOTIO RETINÆ: OR SOME OF THE EFFECTS OF DIRECT AND INDIRECT BLOWS TO THE EYE.

Dr. Holt reported four cases. In two of these the patient was struck more or less directly by a stick of wood, in one by a round rod or cane, and in the other by a flat piece of coal, striking the forehead, nose, and cheek, not hitting the eye itself. In three cases recovery was uninterrupted. In one there was a relapse, vision was reduced to a perception of light for four days, after which it began to return, and in the course of two weeks became nearly normal. Relapse then occurred and vision sank, but not so low as it was after the receipt of the injury, and recovery with a perfect eye took place much more slowly than at first. Dr. Holt gave a detailed history of this case and also of one of the others.

THE PRESIDENT remarked that Dr. Holt had reported four cases manifestly dissimilar in character. From a thorough study of the affection referred to, he had become convinced that commotio retinæ is a phenomenon which had been entirely explained upon the supposition of a fissure running through the optic foramen of the orbit, and is almost entirely a mythical supposition by itself.

DR. SEELY, of Cincinnati, thought the subject could not be dismissed so summarily as Dr. Noyes had supposed. He had reported one case which could not be explained away so readily, because a single application of electricity restored a vast amount of vision, and there was no explanation of the extreme lowering of the vision from which the patient suffered.

DR. KIPP referred to a case in which there was a fracture and subsequent blindness, and suit was brought for damages. The question which arose was, whether the case was one of congenital blindness with divergence, or was it due to injury. On further examination of the patient and the surroundings, he discovered that the mother had the same condition in the corresponding eye, and taking this into consideration, he concluded that the blindness was not due to the injury.

The paper was further discussed by Dr. Gruening, Dr. Knapp, Dr. Wadsworth, and Dr. McKay.

A paper entitled, *Two Cases of Exophthalmoplegia-externa, associated with Disease of the Optic Nerve from Brain Tumor, with an account of the Post-mortem Examination*, by DR. CHARLES STEADMAN BULL, of New York, was read by title, and referred to the Committee on Publication.

INJURY TO THE EYES BY HANGING.

DR. F. B. LORING, of Washington, said that since the series of experiments reported by Dr. Dyer he had seen no communications concerning the effect produced upon the eyes by hanging, except the case reported by Dr. Green, of St. Louis, which was not corroborative. He had had opportunity to observe one case, which he wished to place on record. In that instance both eyes were affected, although one was not affected so markedly as the other.

DR. GREEN remarked that his case was not corroborative of Dr. Dyer's conclusions in a certain sense; but he did not consider it valuable either as corroborative or otherwise, because the time limited for examination after the execution was too short, not being more than one hour.

DR. HOWE, of Buffalo, referred to one case in which he examined the eyes thirty-five minutes after the execution, and was unable to see any change.

DR. R. H. DERBY referred to three cases, which he had already reported, in which there were marked changes in the eye produced by hanging.

COLOBOMA OF THE CHOROID.

DR. MCKAY, of Wilmington, Del., wished to place on record three cases; in one there was coloboma of the iris. Two cases occurred in children, aged respectively seven and ten months; the other occurred in a woman twenty-eight years of age. In the child seven months of age, the coloboma of the iris occurred.

EYE-BANDAGE.

DR. THEOBALD, of Baltimore, presented an additional modification of his bandage, which he regarded as a substantial improvement. It consisted in cutting the eye-piece bias, in order to prevent the tendency to wrinkling.

IMPALPABLE POWDERS.

DR. MITTENDORF called attention to a new method of applying remedies to the eye, namely, in the form of impalpable powders or triturations. He presented several specimens of remedies prepared in this way.

THE PRESIDENT remarked that he had employed homatropin prepared in this way, and had been well pleased with the preparation.

DR. JONES asked if this method was preferable to the disks prepared by Savory & Moore.

DR. WADSWORTH, of Boston, spoke of the loss of power in a solution of eserine. Recently he had found a solution which was three years old, and it still worked perfectly well.

DR. SEELY, of Cincinnati, said that for ordinary purposes he preferred an old solution of eserine to a fresh one.

The following were elected

OFFICERS FOR THE ENSUING YEAR:

President.—Dr. H. D. Noyes, of New York.

Vice-President.—Dr. William F. Norris, of Philadelphia.

Secretary and Treasurer.—Dr. R. H. Derby, of New York.

Publication Committee.—Drs. E. G. Loring and D. B. St. John Roosa, of New York.

It was determined to hold the *next Annual Meeting* at Kaaterskill, New York, on the third Wednesday in July.

The Society then adjourned.

CORRESPONDENCE.

A FRAUDULENT PUBLICATION.

To the Editor of THE MEDICAL NEWS.

SIR: I have recently received several letters from physicians inquiring what is my relation to a volume entitled *An Epitome of Medicine, Surgery, and Obstetrics, Including Nervous Diseases and the Diseases* *of Women and Children*, by Alfred Stillé, M.D., etc., D. Hayes Agnew, M.D., etc., R. A. F. Penrose, M.D., etc. Philadelphia: Samuel M. Miller, M.D., Publisher, 1883.

Will you permit me to state that my relation to the volume is that of a professor whose legal rights have been infringed, and whose professional rights have been treated with discourtesy; that the work both misrepresents and perverts my teaching, and has been issued without my knowledge, consent, or approval, and continues to be circulated, notwithstanding my exposure of its real character before my medical class at the close of the last session. I beg to warn all medical men that the "Epitome" is not in any sense "by" me, as its title-page declares it to be, and that I denounce it as being a false and fraudulent publication.

Alfred Stillé, M.D.

Philadelphia, July 20, 1883.

To the Editor of The Medical News.

Sir: I am receiving letters from various sections of the country, asking for information in regard to my connection with a little volume published by a Dr. Samuel Miller, and entitled *An Epitome of Medicine, Surgery, and Obstetrics*, by Drs. Stillé, Agnew, and Penrose.

I have no desire to increase my correspondence, already too onerous, and therefore deem it best to avail myself of the columns of your widely circulated journal to inform my professional brethren that I disown any relation whatever with this miserable piece of literary larceny, published entirely without my knowledge, and only remarkable for inaccuracy, stupidity, and audacity on the part of its author.

Yours, truly,
D. Hayes Agnew, M.D.

Philadelphia, July 21, 1883.

NEWS ITEMS.

BROOKLYN.

(*From our Special Correspondent.*)

Health of Brooklyn.—In the first six months of the current year the total number of deaths was 6674, at a death-rate of 21.4 per 1000. Smallpox had caused 1 death out of 11 cases; measles, 30 deaths out of 1061 cases; scarlet fever, 363 deaths out of 2146 cases; diphtheria, 239 deaths out of 713 cases. Deaths by whooping-cough were 64, and by typhoid fever 32; the cases of these diseases not being fully reported, they are not quoted. The number of vaccinations, chiefly done in May and June, was 4519.

Suicide of a Physician.—Dr. Milligan Patchen, a recent graduate of the Bellevue Hospital College, committed suicide, in New York City, on the night of July 22d, by shooting himself through the head. He was only twenty-five years of age, and had been recently appointed one of the corps of summer inspectors of the Department of Health. No communication was left by him to show the cause of his self-destruction, and his friends state that nothing peculiar had been remarked respecting his conversation or demeanor.

CANADA.

(*From our Special Correspondent.*)

Quebec Medical Board.—The College of Physicians and Surgeons, of the Province of Quebec, held its triennial meeting in the City of Quebec on the 11th, under the Presidency of Dr. R. P. Howard, of Montreal. In the address, reviewing the work of the past three years, Dr. Howard stated that the special prosecutor had instituted forty-nine suits against persons practising illegally. The matriculation examiners of the Board had admitted one hundred and forty-two candidates to the study of medicine and one hundred and fifty-three licenses to practice had been granted by the Board. A lengthened discussion took place on the propriety of changing the present mode of electing the governors of the College, in order to give the country districts proper representation. The matter was referred to the incoming Board. The ballot was then taken for the governors, and after the result was declared, a meeting of the new Board was held, when the following officers were elected for the next triennial period:

President.—Dr. C. E. Lemeux.
Vice-President for Quebec.—Hon. Dr. Ross.
Vice-President for Montreal.—Dr. Kingston.
Secretary for Quebec.—Dr. A. G. Belleau.
Secretary for Montreal.—Dr. F. W. Campbell.
Registrar.—Dr. L. Larue.
Treasurer.—Dr. E. P. Lachapelle.

Cholera.—The latest cable reports announce the appearance of cholera at Alexandria, and the death there of one European from it.

The Khedive and the Ministers have gone to Cairo to make necessary sanitary arrangements.

A Sanitary Commission, composed of General Sir Evelyn Wood, Baker Pasha, and General Stephenson, has been formed. It has decided to establish three additional hospitals at Cairo, and is organizing an ambulance corps.

The Sanitary Commission has decided that all passengers must undergo a medical examination before leaving Egypt, and it is considering permanent sanitary measures to be enforced against vessels arriving at Egyptian ports from Bombay. About Alexandria all business and agriculture has been suspended. Two months' delay in legal judgments has been granted.

At Cairo the disease has broken out among the British soldiers stationed in the Citadel, and the mortality from the disease in the city is very large. On the 21st there were 381 deaths; on the 22d, 295; on the 23d, 427, and on the 24th, 463. The disease is very sudden in its onset, and its victims frequently fall dead in the streets. It is stated that about one-third of the hospital cases die. The epidemic is spreading northward as well as southward.

At Suez the cholera has broken out among the British troops recently arrived from Cairo, and quarantine against arrivals from infected and suspected ports has been renewed. Cholera has also appeared at Ismalia.

The inhabitants of the most infected portion of Bulak have been sent to Tourah, a place ten miles up the Nile, and their houses have been burned. They are surrounded by a cordon, nothing is supplied them, and they are dying of famine. The cholera is spreading among the guards.

Cholera has also appeared at Damanhour, where crowds of people, unable to pass through the cordon, are collected, and are badly lodged and fed.

At Fareskour, eight miles southwest of Damietta, the leprosy has also appeared, and is spreading rapidly.

At Bombay there are serious fears of the outbreak of an epidemic, as during the past week there were thirty-seven sporadic cases.

The English Government has despatched to Egypt twelve doctors who are experts in cholera, and forty have been sent from India to Egypt.

In Paris, inspectors are visiting all the houses in the populous quarters of the city, in order to institute measures to guard against the cholera.

M. Pasteur, we learn, has offered the French Government to organize a commission to investigate the cholera in Egypt, and the Consulting Committee of Hygiene has reported in favor of the proposition. The commission will be composed, it is said, of MM. Rouy and Thuillier, assistants in M. Pasteur's laboratory; Strauss, of the Faculty of Medicine of Paris, and M. Nolacq.

With a view to the prevention of the introduction of the disease into the United States the Secretary of the Treasury, at the suggestion of Surgeon-General Hamilton, of the Marine-Hospital Service, has telegraphed instructions to the American Consul-General in London and the Consul in Liverpool, to appoint at once sanitary inspectors whose duty it shall be to inspect all vessels leaving the United Kingdom for the United States, and to inform by cable the health authorities in this country of all such vessels having disease on board or being liable to develop disease on the voyage.

This action was taken in consequence of the rumor which has reached here, that cholera had appeared in the London docks, but which, happily, has not as yet been confirmed. Full instructions to the inspectors were at once prepared by Surgeon-General Hamilton, and forwarded by the State Department on the Alaska, which sailed on Tuesday. Pending the arrival of these instructions, the inspectors will act under cable advices.

Yellow Fever.—There were thirty-nine deaths from yellow fever in Havana during last week.

The various commercial bodies in New Orleans, a few days ago adopted the following resolution, which was approved by the Board of Health and forwarded to Governor McEnery.

Resolved, That the Board of Health be requested to petition the Governor of the State of Louisiana to have all infected vessels now in the waters of the State removed out of the same, and that he issue his proclamation that henceforth no vessel from any infected port be permitted to enter the waters of the State.

The following resolutions were then unanimously adopted by the Board of Health:

Whereas, There is danger of yellow fever being introduced into New Orleans through unrestricted communication between Ship Island and the coast of the State of Mississippi.

Resolved, That the Governor of the State of Louisiana be requested to call the attention of the Governor of Mississippi to this fact, and urge him to take stringent measures to put a stop to this dangerous intercourse; and be it

Resolved, That the General Government be requested through the proper authority to order that no communication should be held between Ship Island and the Mississippi coast.

Suing for a Diploma.—A member of the class of 1883 of the College of Physicians and Surgeons of Baltimore, who was rejected in his candidacy for a diploma, petitioned the Court to issue a writ of *mandamus* upon the Faculty that they shall issue his diploma to him, claiming that his rejection had damaged his character to the amount of $2,000. After argument before the Court, the judge decided in favor of the Faculty. An appeal has been taken.

President of the Royal Society.—The election of Mr. Huxley as President of the Royal Society, in place of the late Mr. Spottiswoode, has met with warm approbation on all sides, and there is reason to hope that the Society will render still greater services to biological science than before.

Bids for the Hot Springs Hospital.—Bids were opened last week for erecting the proposed Army and Navy Hospital at Hot Springs, Arkansas, in accordance with plans prepared by Surgeon-General Crane, of the Army, and Surgeon-General Wales, of the Navy. The bids range from $60,000 to $120,000. The contract will be awarded in a few days.

Dr. Osler.—Dr. William Osler, Professor of Physiology in McGill University, Montreal, has just been elected a Fellow of the Royal College of Physicians of London. This distinguished honor is a just appreciation of the excellent scientific work done by Dr. Osler.

Royal College of Physicians.—This College gave a *conversazione* in Pall Mall on July 4th. As usual at these meetings the attendance of visitors was large and distinguished. The guests were received by the President, Sir W. Jenner, K.C.B., Dr. Munk, and Dr. Lionel Beale. At an early period of the evening, H.R.H. the Duke of Albany arrived, and was received and escorted round the College by the President and Censors.

Among the many valuable and interesting objects of art exhibited were some Wedgewood chessmen, designed by Flaxman, lent by Dr. Braxton Hicks, and an antique Moscow enamel, lent by Dr. Alfred Meadows. The President exhibited portrait etchings of George Eliot, Stuart Mill, and Carlyle. Dr. Farquharson, M.P., lent the exquisite drawing of the Royal Academy May-Pole Dance, by Linley Sambourne.

The London Medical Society.—The President, Sir Joseph Fayrer, and Council gave a *conversazione* on July 2d, at the new building of the Society, at which the Prince of Wales, Prince Lucien Bonaparte, and other distinguished guests were present.

Professional Knighthoods.—It is stated that the Queen intends to confer the honor of knighthood on Dr. Pitman, Registrar to the College of Physicians, in recognition of his long and faithful services to that important body, and on Mr. Edwin Saunders, F.R.C.S., for many years dentist to the royal family, and a liberal benefactor of the public institutions connected with his profession.

Health in Michigan.—Reports to the State Board of Health for the week ending July 14, 1883, indicate that measles, inflammation of the bowels, cholera morbus, diphtheria, pneumonia, and diarrhœa have increased; and that intermittent fever has decreased in area of prevalence.

Including reports by regular observers and by others, diphtheria was reported present during the week ending July 14, and since, at 21 places; scarlet fever at 13 places; and measles at 23 places.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JULY 16 TO JULY 23, 1883.

Elbrey, Frederick W., *Captain and Assistant Surgeon.*—The leave of absence granted on Surgeon's certificate of disability by S. O. 26, A. G O., January 31, 1883, further extended six months on Surgeon's certificate of disability.—*S. O. 162, A. G. O., July*, 16, 1883.

Powell, Junius L., *Captain and Assistant Surgeon.*—Assigned to duty at Fort Columbus, N. Y. H.—*S. O. 130, Department of the East. July* 18, 1883.

Richard, Charles, *First Lieutenant and Assistant Surgeon.*—Assigned to duty at Fort Adams, Newport, R. I.—*S. O. 130, Department of the East, July* 18, 1883.

THE MEDICAL NEWS.

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ORIGINAL LECTURES.

ON THE TREATMENT OF HYSTERIA.[1]

A Clinical Lecture,

BY PROF. DUJARDIN-BEAUMETZ,

MEMBER OF THE ACADEMY OF MEDICINE, PHYSICIAN TO THE HOPITAL ST. ANTOINE, PARIS, FRANCE.

GENTLEMEN: In taking up as my subject to-day the treatment of hysteria, I do not conceal the difficulties of my task. Hysteria embraces a great number of affections of the nervous system, from the so-called "vapors" of hypochondriacal females, to that hystero-epilepsy so recently described by Charcot as the great hysteria. If the domain of this neurosis is immense, its limits are far from being precise, and he would be a bold man who would in all cases venture by a hard and fast line to separate nervousness, hypochondriasis, epilepsy, and even lunacy, from hysteria. So, as Lasègue has very judiciously said, we are not able to-day, and perhaps never shall be able, to give an exact definition of hysteria; we can only affirm that, by its strange manifestations, hysteria has erased the word *impossible* from pathology.

But before entering into the details of the question, I owe you a declaration of principle; it is that, from the point of view of treatment, hysteria, by its very nature, defies all positive and scientific therapeutic rules. This results from two causes: first, the preponderant part which the imagination plays in this disharmony and disordered equilibrium of the functions of the nervous system, and which determines, as a consequence, that oftentimes where the physician, well-informed, conscientious, patient, devoted, fails, the most brazen charlatan will easily succeed. Hysteria is in fact the harvest-field of quacks, the domain of miracles and surprises. A second factor of importance, as having a bearing on the therapeutics of hysteria, is the disposition of the hysterical female to deceive her attendants, a disposition which Dally has characterized by the name *deliré malicieux* (malicious delirium).

This mental condition of hysterical patients, to which Huchard attaches so great an importance, will prompt intelligent females to endure extreme tortures in order to maintain a morbid state which their will alone has engendered. It results from this singular perversity, that every exhibition of drugs and every therapeutic application which has for its end the treatment of hysteria, may be attended with disappointment; and that one can never affirm that a medicament which has given good results in one case of hysteria will give the same results in another case. In a word, in this neurosis every thing may fail, and every thing may succeed.

With these reservations (which it belonged to me to make), I come to the treatment of hysteria, which comprehends three parts—the general treatment, treatment of the attacks, and, finally, the treatment of certain hysterical symptoms.

The general treatment of hysteria is subdivided into hygienic and medical treatment. We will commence with the hygienic treatment. Here the first place belongs to education, as being of prime prophylactic importance. We can, in fact, in the majority of cases, prevent the development of this neurosis, for it is hereditary, and a hysterical mother has a great chance of seeing her children neuropathic or hysterical.

I believe that the education of children, when they have attained the age of eight or ten years, ought not to be left to the mother. I would remove the young child, and particularly the young girl, from a tutelage too indulgent, too tender, and too ill-regulated; the child should never be allowed to witness any hysterical manifestations on the part of her parent, for imitation plays a considerable *rôle* in hysteria.

It is a good plan to place the girl in a boarding-school, situated, if possible, far from the city. I say boarding-school, for isolation is a bad thing in hysteria, and education with other boys and girls, notwithstanding some serious inconveniences, has real advantages in the case of neuropathic children. Young girls with predisposition to hysteria should not be permitted to read exciting novels, fairy tales, etc., which heat the imagination. Even the culture of piano music, and especially organ-playing, has disadvantages which make it desirable, when possible, to interdict these accomplishments. I have seen hysterical patients who have found in the practice of the organ an aggravation of their nervous symptoms, and this as well from the excitement to the nervous centres occasioned by working the pedals with their lower extremities, as by the effect of the music in stimulating their emotional natures.

On the other hand, neuropathic girls should be allowed physical exercises in the open air, horseback riding, gymnastics, even swimming, etc. In fact, their discipline should be fortifying, virile, and severe. I say *severe*, but it will not do to go to the other extreme, and, while interdicting romances and dancing, develop unduly the religious emotions, for it is quite possible to cultivate in them a state of religious mysticism and ecstasy, which is nothing less than the very disease against whose protean manifestations we are contending.[1]

It is generally at the epoch of puberty in young girls, and at the time of the appearance of the menses, that the first manifestations of hysteria occur. Although the old doctrine that would place in the uterus itself the exclusive point of departure of hysteria, and which has given it its name, is to-day abandoned—since we do now and then observe hysterical men, and even in the female this neurosis may develop without any uterine trouble at all—it is none the less true that the uterus plays a preponderating part in this neurosis.[2]

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[1] Translated from advance sheets by E. P. Hurd, M.D., of Newburyport, Mass.

[[1] Herbert Spencer, in his treatise on Education (Appleton ed., p. 212), has these golden words, which, if they summarize the highest duty of the educator, also convey a valuable lesson to the intelligent physician who would be to his constituency something more than an administrator of drugs. A "self-governing being" is not merely one who is governed by others—it is a being whose lower propensities are subordinated to the higher; in hysteria this subordination is lacking.

"Bear constantly in mind the truth that the aim of your discipline should be to produce a self-governing being; not a being to be governed by others."—TRANS.]

[[2] One of the worst cases of hystero-epilepsy that I have ever witnessed occurred in my practice this very year (February, 1883), and seemed clearly due to retroflexion of the womb. At any rate, after replacing the organ, and applying a suitable pessary, the convulsive seizures, which before had been very frequent, ceased, and

Michelet, in one of his works, has given the following definition: "Woman is a womb, served by organs." This somewhat spiteful definition finds justification in the case of the hysterical female, to whom it is especially applicable, and it may be established as an immutable law, that in hysteria it is during the menstrual period that the nervous symptoms are most accentuated; this period, then, claims your most watchful attention, and your treatment ought always to follow these menstrual epochs. This question of the *rôle* of the uterus leads me to speak of another point of hygienic treatment in hysteria to which great importance has been attached. I refer to continence and to marriage, and I ask you patiently to follow me in what I have now to say touching this debatable question.

Plato compared the womb to an animal which has but one end to fulfil, that of conceiving, and which becomes furious when its functions are not accomplished. From this is derived the doctrine that continence is one cause of hysteria, and that sexual relations are essential to a cure. This doctrine is so much in vogue, here in France, that one needs only utter the word *hysteria* in a family to suggest the idea of excess of continence to those attending on the patient, and in some circumstances this would be taken as an insult. Hence, I advise you to be chary in the use of the word in your private practice, especially in the presence of the family; say that the patient is neuropathic, that she is affected with nervousness, but avoid the word *hysteria*.

This popular opinion is based—bear in mind—on the declarations of medical men, and till recently the majority of physicians who have written on hysteria, and their number is considerable, have maintained the influence of continence on the development of this neurosis. Briquet was the first to take a stand against this way of thinking, and the arguments which he has adduced have, in my judgment, a high cogency. He has shown that when you take under consideration groups of females who from the point of view of sexual relations lead quite opposite lives, nuns, on the one part, among whom continence is the rule, and prostitutes on the other, among whom continence is unknown; he has shown, I repeat, that hysteria is much more common with the second class than with the first. Moreover, do we not see in our hospital services that the greater part of our hysterical patients are women to whom continence is the rare exception, and who have a more than sufficient satisfaction of their sexual wants? I quite agree then with Briquet, and believe that if continence may have a certain influence on hysteria, an influence by no means scientifically demonstrated, genital excitations are quite as detrimental.[1]

Families will often ask you whether young hysterical girls ought to marry; it is best to be non-committal in this matter, and not affirm, as has often been done, that marriage may cure the hysteria. To counsel marriage in such a case is a responsibility which the physician ought not to assume, for it is not proved that marriage ameliorates the condition of a hysterical person, and in order to obtain a problematical benefit he may doom a husband to a life of chagrin and unhappiness.[2]

It would be a curious chapter which should relate the history of the part which husbands have had to play in this deplorable neurosis. The husband of a hysterical woman often finds himself in a sorry plight. However amiable and attractive, however persuasive and commanding, he can neither please nor control a woman of disordered brain, before whose capricious whims he is powerless; whose actions, however seemingly reprehensible, are performed almost without volition and without consciousness. In other cases the husband undoubtedly favors the development of hysteria in his wife by the incessant concern with which he treats her manifestations. By the attentions which he lavishes on her, by the anxious exaggerated affection which he displays, he fosters and encourages the ataxic phenomena. The man is fortunate who, constantly and sympathetically watching the hysterical explosions of his wife, does not, by imitation, become hysterical himself. The spectacle has more than once been witnessed of a neuropathic couple (generally without children) bewailing and intensifying their mutual ailments. Here separation is most salutary to both parties.

Fortunately, the marriage of a hysterical person is not always so gloomy in its results; where especially the husband, by his coolness and firmness, his good-sense and moral influence, gives to the wife a sage and dominant direction, which mitigates and moderates the nervous phenomena. While, then, it may be said that marriage is a good thing for hysterical women, when it brings with it happiness and tranquility, it is nevertheless true that oftentimes those most favored by fortune and surrounding conditions, whose life, calm and peaceful, ought to be without a cloud, suffer from groundless fears and imaginary ills, and are always unhappy beings, and all in consequence of an ill-balanced nervous organization.

There is no kind of life which is exempt from hysteria, and we find this neurosis among the poor and among the rich, those that labor and those that hire; we see continually examples in our private practice, and in our hospital service. The country also furnishes its contingent of hysterical patients. It has been maintained that country life preserves from hysteria. This is a mistake, and we observe instances the most curious and obstinate of this neurosis in our rural villages. Apart from heredity, disappointed hopes are a most prolific cause of hysteria, and whatever the station or occupation in life, depressing cares and disappointments will come.

As occasional or aggravating causes of hysteria, we may refer to two kinds of life diametrically opposite: on the one hand, a too fashionable life, with all its pleasures and all its fatigues; on the other hand, a too solitary life, with all the ennui which accompanies it. In the one case the hysteria is brought on by nervous excitement, in the other by a morbid brooding over neuropathic symptoms which are thereby perpetuated and aggravated. It is important, then, that you should find diversions for your hysterical patients, but such diversions should not exceed certain limits.

As for diet, it should be of a nourishing and unstimulating character. I advise you especially to forbid the use of tea and certain alcoholic liquors. I believe that the abuse of tea is an occasional cause of hysteria, especially where one is not accustomed to it, and I have seen nervous women improve with suppression of this beverage.

Among the wines, you ought especially to forbid heady and sparkling white wines, as champagne, and all the heavy alcohols, particularly absinthe. Lancereaux has, in fact, shown that in alcoholic patients, and especially absinthe-takers, there exist sensory troubles akin to those of hysteria, and it is probable

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have not since returned. This patient, who was then living at one of our large boarding-houses, was seen by Drs. Snow and Montgomery, of this city, and they can testify with me to the violence and unmanageable nature of the paroxysms.—Trans.]

[1] Briquet, Traité de l'Hysterie, Paris, 1859.

[2] Briquet has shown that marriage has but little modifying influence on hysteria. In 98 cases marriage was detrimental in 50, without influence in 31, and in 17 ameliorating. Bernutz's statistics show that hysteria is a little less common in the married than in the unmarried, but only in the proportion of 7 to 9. *Vide* Briquet, Traité de l'Hysterie, p. 461.

that the greater part of men who are afflicted with hysteriform neuropathic disorders are men who have been addicted to alcoholic stimulants and to absinthe.

I come now to the medicinal treatment of hysteria. This treatment will comprise three parts: the pharmaceutical treatment, the treatment by balneotherapy, and the treatment by electricity and metallotherapy.

The pharmaceutical treatment formerly consisted in the administration of that class of medicaments described under the name of antispasmodics, such as (more especially) valerian, musk, castor, galbanum, and assafœtida. The greater part of these medicaments are to-day almost forgotten, and this for several reasons: first, because their antispasmodic effects are far from being demonstrated, and, in the next place, because they have been superseded by a more active medication, that of the bromides. I shall not, then, dwell on all the numerous formulæ of potions, syrups, pills, ptisans, suppositories, and lavements of supposed antihysterical virtues,[1] for which I refer you to your ancient formularies; but before passing to the bromide treatment, I desire to say a few words about valerian, which still enjoys a certain repute in the treatment of hysteria.

Valerian, the officinal portion of which is the root, is administered in infusion, in tincture (the ammoniated tincture is perhaps the best preparation), in the form of valerianates, and especially of valerianate of ammonia. For my part I have little faith in the therapeutic action of these valerianates, and finish what I have to say of this medicament by adding that the pills of Meglin, so much prescribed for nervous disorders, contain a notable quantity of extract of valerian.[3]

Who says hysteria, says bromide, and at the present day there is not a hysterical person but has taken bromide. The bromide of potassium is the most often employed, but you may also use the bromides of sodium and ammonium in combination with it, constituting solutions of the mixed bromides, of whose effects Charcot has spoken so highly. Here is the formula which I habitually use: R.—Bromide of potassium, bromide of sodium, bromide of ammonium, āā x; water ccl.—M. Signa.—A dessertspoonful to a tablespoonful night and morning.

I do not intend here to enter into details as to the physiological action of these bromides, of which I shall have more to say when I come to the treatment of epilepsy. What I wish now to impress upon you is that these medicaments are among the most powerful depressants of the cerebro-spinal axis, and that it is owing to them that we can control the exaggerated manifestations of the nervous system. If we add that the bromides allay genital excitation, you comprehend all the advantages which we may derive from this precious remedy in the treatment of hysteria; at the same time I am far from affirming that the bromide medication is to be applied indiscriminately to all cases of hysteria, and it is because abuse has been made of this medicament that we see to-day certain physicians maintain that it is rather detrimental than useful in the treatment of hysteria. This is by no means the case; only here, as for other medicaments, it is necessary to know the indications and contra-indications for this bromide treatment. Moreover, you must not fail to keep in mind that whatever may be the relationship between hystero-epilepsy and epilepsy (and some pathologists affirm a very close relationship), there exists, from a therapeutical point of view, a great distinction between these two affections. In fact, while epilepsy is tributary to the bromide medication, this same treatment has never effected a cure of the attacks provoked by hystero-epilepsy.

When the hysteria is accompanied by insomnia, excitement, and, in particular, genital excitement and much agitation, moreover, when the patient is of robust frame, the bromide will give admirable results. On the contrary, when your patient is feeble and anæmic, manifesting her neurosis by gloom and tears, and the nerve-centres are depressed in their action (there being no genital excitation), the bromide can do nothing but harm. The great inconvenience of the bromide results from its depressant action on the nervous system, and patients submitted to this treatment experience such a physical and mental torpor that it is difficult for them to apply themselves to their ordinary tasks.

The acne eruption which often follows the continued use of bromide in large doses is a serious evil, especially to fashionable young ladies, who strongly object to see their faces disfigured with this rash, and sometimes refuse the remedy altogether. I know no means of preventing this bromide eruption, which results from the elimination of the bromide by the skin. I know that it has been claimed that the internal use of arsenic will prevent the eruption, but I have often given it for this purpose with no result whatever.

As for the dose, this varies according to individuals, but, as a guide, you ought always to have recourse to an examination of the reflex sensibility of the velum palati, and your doses should be large enough to obtain, in most cases, anæsthesia of the pharynx. By way of caution, I would advise not to give the bromide for a great length of time, and to occasionally suspend the treatment. For your guide, you have only to follow the evolution of the nervous manifestations. In most cases these manifestations are produced about the time of the catamenia; it is before, during, and after these periods that you ought to administer the bromide, and in such a manner that there may be in each month fifteen days of treatment and fifteen days of rest.

Besides the alkaline bromides, other bromides have been recommended, such as bromide of zinc and bromide of camphor. The latter has been much vaunted these late years, but its action is very uncertain, and it has no efficacy except in cases of genital excitement; as for bromide of zinc, this preparation, little employed in this country, has been highly spoken of by Hammond, of the United States, who advises it especially in epilepsy. Opium plays an important part in the treatment of hysteria, and like bromide, has its advantages and disadvantages. It was my master, Bernutz, who, after Gendrin, extolled especially the opiate medication. He administered laudanum in the dose of two drops twice a day, and gradually increased the dose till forty drops were taken in the twenty-four hours. This treatment is mainly applicable to the asthenic forms of hysteria: I believe it useless and dangerous in the sthenic forms, and you plainly see the indications for the opium treatment are directly opposite to those for the bromide treatment, for opium has an exciting action on the nervous system, while bromide is depressant. Unhappily, this treatment by opium has another disadvantage, in the large doses which one is compelled to attain in these cases, and many hysterical patients become morphomaniacs. In order to avoid these disadvantages, it has been proposed to substitute chloral, but here again you encounter serious inconveniences, for the continued use of chloral in doses gradually increased is very detrimental.

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[1] Vide Dictionnaire de Therapeutiques, by Dujardin-Beaumetz, article Assafœtida.

[2] This is the formula of Meglin's pills, called compound pills of hyoscyamus and valerian:

R.—Alcoholic extract of hyoscyamus,
Alcoholic extract of valerian,
Oxide of zinc, . āā 10 grm. or ʒijss.—M.
S.—Divide in pil. No. cc.

This question of dose in neuropathic patients is of the greatest interest; hysterical subjects present, as Huchard has well said, a *veritable therapeutical ataxia.* Sometimes they are poisoned by extremely small doses of certain substances, and sometimes they experience no therapeutic effect from really enormous doses. It is well to bear this fact in mind when called to treat a hysterical person. Do not forget, moreover, that there exists from the point of view of medicinal treatment, a moral influence of a direct and positive kind, and that here you will have occasion to witness the triumph of pills of *mica panis*, of potions of the extract of dandelion; in a word, of all those preparations which act on the imagination alone. The history of medicine abounds in cases where, owing to the assurance with which they have been prescribed, these pills and these potions have had the most signal curative efficacy in neuropathic individuals.

By the side of the pharmaceutical treatment, and even above it, is placed balneotherapy, which comprehends three modes of application; baths, hydrotherapy, and mineral waters. Warm baths, and particularly prolonged baths, have a very happy influence in the treatment of nervous disorders, especially in the period of excitation, and Bernutz has greatly vaunted their effects. These baths ought to be of from one to two hours' duration, and the water all this time should be kept at the same temperature. The therapeutic virtues of these baths are augmented by adding infusions of aromatic plants, as melissa or valerian, of which medicated baths Beau speaks in high terms. The good effects derived from these medicated baths are explicable, not on the principle of cutaneous absorption—the skin with its epidermic covering does not absorb medicinal substances contained in baths—but entirely by the introduction through the respiratory passages of the odorous and volatile principles of the herbs employed. It has, as you are aware, been maintained that in order to obtain the therapeutic effects of valerian it must be administered, not by mouth but by inhalation.[1]

Hydrotherapy plays an important part in the treatment of hysteria; it constitutes, with the bromides, the grand basis of the therapeusis of this disease, but it is important that you should know how the cold water should be applied. It is advisable to employ douches with broken jets, and never to use cold douches at the beginning of the treatment, but always tempered douches. The effect on the nervous system of cold water is sometimes so violent in hysterical patients, as to determine such a state of suffocation that after enduring the first cold douche, they obstinately refuse to submit any longer to this treatment. It is well, then, to begin with tempered douches (about 25° to 30° Cent.), and to progressively lower the temperature of the water; it is only when the system is habituated to this mode of treatment that you will be able to give cold douches, or rather alternate douches [douches alternately cold and hot]. These last sometimes have too stimulant an effect and determine hyperexcitation; you must then return to tempered douches. In a word, in your hysterical patients, you ought always to begin with tempered douches, and then, according to the periods of excitation or depression in which your patient is found, you should employ the stimulating action of the alternating douche, or the sedative effects of the tempered douche. You must avoid at first douching the heads of your patients; I have often seen the shower-bath on the head determine neuralgic pains of a severe nature, or quite persistent vertigines. The duration of the douche ought not to exceed thirty seconds.

You will derive from hydrotherapy thus utilized, very beneficial results; cold-water treatment restores not only the sensibility of the skin, as Thermes has shown, but it also promotes the equilibrium of the functions of the nervous system, and nutrition in general. But in order to obtain these results satisfactorily, it is often necessary to remove the patient from her family surroundings, and to place her in some hydrotherapeutic establishment, where the administration of cold water is made with great skill and prudence. And this is a point on which Charcot has justly insisted. Mineral waters have a feeble part in the treatment of hysteria, and generally, as it is the action of cold water that is sought, patients are sent to the hydrotherapic stations so numerous in the centre of Europe, and which especially abound in Switzerland and in Tyrol; stations of which Devonne and Aussèe are types, and which, with the action of cold water, unite all the climatic conditions favorable to the treatment of affections of the nervous system. In France we have a thermal station which enjoys a certain repute in the treatment of nervousness, I refer to Neris; to these waters you may join those of Ussat, St. Sauveur, and Forges les Eaux.

But, while on this subject of mineral waters, I must caution you against the employment of sea-baths in hysteria. I see many of my confrères send their hysterical patients to the sea-side; it is a bad practice. For my part, I have always seen sea-air, and especially sea-baths, attended with such excitation that my. patients were much the worse fer it; so, in my opinion, the hysterical condition contra-indicates the employment of sea-baths.

Electricity is doubtless an element of secondary importance in the treatment of hysteria; nevertheless, it renders us good service. It may, as we shall presently see, arrest the attacks, or diminish their number; it may also modify general sensibility, like hydrotherapy. In these cases, it is especially to static electricity that you should have recourse, as it is this form of electricity, revived by Arthuis, and more recently by Charcot and Vigoureux, which gives the best results. It is here that you should make use of those general electric baths, those electric brushes, and those sparks which I described in my lecture on medical electricity, procedures which constitute what is called franklinization. But there is a kind of medication which has with electricity many points of contact. I refer to metallotherapy, on which I desire to dwell at some length. From the most remote antiquity, medical properties have been attributed to metallic plates, and plates of copper, lead, or gold, applied as veritable amulets to the skin, have had curative efficacy in certain nervous disorders, according to the statements of ignorant pretenders. About the end of the last century, an American physician by the name of Perkins grouped together all the facts from Galen downward, and propounded a medical doctrine which bore the name of *Perkinism.* But almost all of these facts were forgotten when Burq commenced his experiments, and it is to him that we owe the valuable discovery of metallo-therapeutics and the indications which flow from it. The first tentatives of this experimenter were made in 1850, and it was not till nearly thirty years later, after the reports made to the Society of Biology, in 1877 and 1878, by Dumontpallier, that this method entered definitely into the domain of current practice. Burq affirmed that metals applied to the skin restore sensibility, force, and animal heat, and that, according to circumstances little understood, the curative metal varies with individuals. Such a person is sensitive to gold, another to iron, another to copper, etc. etc., and from the results of these external applications of metals he drew conclusions as to the internal administration of metallic preparations, which had the same property of restoring sensation and bodily heat; in a word, metalloscopy led to metallotherapy.

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[1] Pomme has greatly extolled prolonged baths in hysteria; he regrets that the day is not more than twenty-four hours long, because, that now, he is not able to give them as long as he would like.

Beau and Bernutz advise warm baths of two, four, six, and eight hours' duration.

Bernutz has seen, under the influence of baths six hours long, cataleptic attacks that have lasted six or eight months disappear completely. (Pomme, Traité des affections vaporeuses des deux sexes, Paris, 1883. Bernutz, art. Hysterie, in Nouveau Dict. de Med. et de Chir., 1873.)

The experiments made in this direction by the Committee of the Society of Biology, under the supervision of Charcot and Dumontpallier, brought to light a great number of new facts; they showed that troubles of sensibility, limited to one-half of the body, might, under the influence of these metals, be transferred to the half not affected, thus illustrating what has been described as the *law of transfer*.

It was also discovered that metals were not the only bodies capable of modifying sensibility, and the number of æsthesiogenous substances, as they are to-day called, increased sensibly. Charcot and Regnard, taking up again the first experiments of the end of the last century, noted the æsthesiogenous properties of magnets. Vulpian showed that electricity, applied to a very circumscribed part of the cutaneous surface, possessed the same properties. Then Grasset, with the vesicatory; Thermes, with cold water; Parona, with metallic salts; Seure, with dried collodion and cellulose; and Lannois and Huchard, with jaborandi, obtained the same results. I myself, in my hospital service, have shown, as Jourdanis had previously done, that wood, like metals, can restore sensibility, and that, just as there exist active and inactive metals, there exist also woods with variable action, so that, alongside of *metallotherapy*, we have *xylotherapy*.

The method invented by Burq, and called *Burquism*, gave rise to numerous experiments which were not limited to the school of Salpêtrière. In Germany, Westphal, Eulenburg, Mader, Ost; in Italy, Maragliano, Sepelli, Sciamanna, Parona; in England and America, Thompson, Hughes Bennett, Tuke, Donkin, Sigerson, Beard, Gradle, and Hammond, repeated the experiments of Burq, and to-day we have documents sufficiently complete, and sufficiently numerous to enable us to appreciate this method at its just value.[1]

First, how are these metallic applications made? In a very simple manner. All that you have to do, is to apply to the skin of your patient certain metallic plates as directed by Burq, or what is much more handy, pieces of money, and to watch the phenomena that occur after this application, which may have a variable duration and extent; thus, for example, you can make bracelets or girdles of these coins, to be worn for a time around the diseased part. We utilize in same way the disks of wood or of dried collodion; as for magnets, you should use large ones, of considerable power, and a weight of at least twenty pounds.

Internal metallotherapy may be tried; *i. e.*, having once recognized the active metal, you may give some pharmaceutical compound containing a salt of the metal in question. On this principle, chloride of gold has been given in the dose of one to two centigrammes a day, nitrate of silver in the dose of one centigramme, the salts of zinc, and especially oxide of zinc, in the dose of twenty to thirty centigrammes, the salts of copper, the salts of iron, etc.

What are you to think of metallotherapy? Are there certain genuine facts at the basis of this medication, or is it a species of dupery? After the report of Dumontpallier to the Society of Biology, medical men here in France and abroad were divided into two parties, one party maintaining that metalloscopy had no serious basis, and that a certain effect wrought on the imagination of hysterical patients, "expectant attention," as it was called, explained all the phenomena observed; others, on the contrary, maintained the positive remedial power of the metallic applications, apart from any "moral" effect.

To-day, gentlemen, unless we except a few obstinate individuals whom nothing can convince, everybody seems to be agreed that there do exist æsthesiogenous substances which restore or transfer sensibility, or cause to disappear certain nervous troubles, not only in the case of neuropathic persons, but also in certain lesions of the nervous system. But while admitting the truth of the facts adduced by Burq, it must be borne in mind that from the exclusive point of view of therapeutics, this method has not realized all that has been expected of it. Yes, the application of metals to the cutaneous surface has sometimes caused sensory troubles to disappear; it has even cured certain contractures, but these are exceptional facts, and the results obtained are temporary. In short, metallotherapy merits a very humble and secondary place in the treatment of hysteria.

I have experimented much with metallotherapy in my hospital service. I have observed facts very curious, very strange, the physiological explanation of which seems to me, at present, impossible to give; but my hysterical patients have not derived from this method any definite or lasting benefit, and they generally go away in about the same condition as when they entered. I add that there is a certain number of anæsthetic hysterical patients on whom metallotherapy has no effect, especially when the loss of sensibility is general. At the same time I admit that there is between the convulsive manifestations of hysteria and disturbances of cutaneous sensibility a very intimate correlation, and when you cause the latter to disappear you often cure the former. We have, then, every interest, from a therapeutic standpoint, in restoring sensibility to the skin, and as metallotherapy is one of the means for attaining this end, in spite of the temporary and often uncertain results which are obtained, it is not best to abandon this mode of treatment, which is attended with no danger, and enables us, in certain cases, to obtain alleviation, if not permanent cure.

I have now finished the general treatment of hysteria, and come to the second part of my subject, the treatment of the attack. When a hysterical subject has an attack, you ought instantly to place her on a small bed or cot convenient for passing around; you should remove all tight clothing and every thing which can cause constriction, and then proceed to employ the various means in repute for putting an end to the paroxysm. Formerly they were in the habit of pouring or dashing cold water on the face of the patient. Cruveilhier, reviving an ancient practice, made the patient swallow large gulps of cold water, but lately we have found a quicker and surer method, that of compression of the ovary.

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[1] The following references do not exhaust the literature of metallotherapy. *Schiff*, Arch. des sciences phys. et nat., Geneva, 1879, No. 3. *Westphal*, Berliner klin. Wochens., July [27, 1878, p. 81. *Mader*, Wiener med. Wochens., 1880, p. 631. *Ost*, Corresp. Bl. Schweiz Aerzte, 1880, p. 524. *Sciamanna*, Gaz. Med. di Roma, June 1, 1878, p. 227. *Parona*, Ann. univ. dè Med. et Chir., Oct. 1879, t. xlix. p. 336. *Bennett*, Brain, Oct. 1878, p. 331. *Eulenburg*, Deutsche med. Woch., June, 1878, p. 151–327. *Tuke*, Metalloscopy and Expectant Attention (Journ. Ment. Sci., Jan. 1879, p. 508). *Gradle*, Metalloscopy and Metallotherapy, (Journ. of Nervous and Mental Diseases, Oct. 1878, vol. 3, p. 718). *Petit*, La Metallothérapie ses Origines son Histoire, Paris, 1881. *Huchard*, Traité des neuroses, p. 1128. *Dujardin-Beaumetz*, Des proprietés esthesiogenes de certains bois, appliques sur la peau (Bull. Gén. de Thér., t. 99, 1880, p. 97). *Hammond*, clin. lecture on Metallotherapy and Expectant Attention, in Philadelphia Med. and Surg. Rep., April 18, 1878.

The ancients, who attributed to the uterus a preponderating *rôle* in the convulsive manifestations of hysteria, had already proposed various manœuvres, which consisted in compressing the womb, in putting in the vagina odorous substances for the purpose of acting directly on the womb, or in various measures for ridding the womb of purulent humors which it was supposed to contain (such even as titillation of the external genitals and neck of the womb, as recommended by Galen, Forestus, and Ambroise Paré). Areteus, Aetius, Sauvages, Astruc, and others dwell long on the advantages of various procedures; you know even that external compression is of vulgar usage, and you often see persons make pressure and even *sit* upon the belly of patients to arrest convulsive seizures. But this practice has been reduced to method since the labors of the Salpêtrière, which have shown us that one of the most frequent hysterogenous points is the ovarian region, and that it suffices to compress this region, either on the left or on the right side, to bring on an attack or to cause one to disappear.

This is the way to practise compression: the patient being placed on a hard, low bed, the physician, standing by her side, plunges the closed fist perpendicularly into the sensitive ovarian region. It is necessary at first to employ considerable force to overcome the contraction of the abdominal muscles, but once this obstacle is overcome, the hand penetrates the iliac fossa, and the spasms cease if the pressure be continued for a certain time.

Certain apparatuses have been constructed, called *compressors of the ovary*, models of which I now show you, and the most simple of which is that of Ferrè, which consists in a hernia truss, terminated by a conical pad, which is applied over the sensitive ovary. This apparatus, they say, will prevent the recurrence of a convulsive attack; I avow that I have never made use of these compressors, and therefore know nothing about them. Surgeons have even gone further, they have proposed ablation of the ovaries, and we have seen Battey and Peaslee perform this spaying operation in cases of hystero-epilepsy.[1]

Unhappily, not all hysterical females have ovarian troubles, and in such cases the method of compression is not applicable; you can then advantageously have recourse to electricity.

Vigouroux and Richer have shown that galvanic currents, one of the reophores being applied over the front, and the other over some other part of the body, diminish the duration of attacks of hysteria; moreover, if you suddenly reverse the direction of the currents, which is easily done with the commutators of Trouvé and Gaiffe, the attack ceases immediately. You must not exceed six to ten milliampères, for if you do, you will determine severe head-troubles.

In fine, inhalations have been proposed of odorous substances; the number of these is considerable, and the ingredients very strange, from deer's horns and goat's feet, to the odors of candle snuff, of the hairs of men and of animals, and the feathers of partridges and woodcocks; the ordinary perfumes, benzoin, musk, ambergris, etc., have all been advised. To-day we discard all these things, and recognize but a very few medicinal substances, whose inhalation has a beneficial effect on hysteria; these are ether, chloroform, and especially nitrite of amyl. Ether and chloroform may render you some service. I have not, however, been very successful with these anæsthetics. The attacks are prolonged, and they are almost sure to reappear when the anæsthetic sleep has passed off. Nitrite of amyl, with which Bourneville has made so many experiments in hysteria, certainly diminishes the intensity and the frequency of the convulsive paroxysms. You must not, however, resort to it, except during the attacks, for at other times it may determine convulsive seizures. When giving the nitrite of amyl, you pour five to ten drops on a handkerchief, and cause the patient to inhale them.

I shall finish this lecture by giving you, with as much brevity as possible, some indications respecting the treatment of certain manifestations of hysteria. The contractures are the most rebellious of symptoms in hysteria, and nothing is more painful than to see young women afflicted with various contractures, which make life a torture. These contractures appear suddenly after an attack, and may disappear as suddenly after another attack. This is an occurrence which is witnessed in all the manifestations of hysteria, and you have seen a fine illustration of it recently in our wards. I refer to that young hysterical girl who entered the hospital for gastric troubles, and was suddenly taken with contractures, which disappeared after a convulsive attack, which we induced by chloroform, given to anæsthesia. This is then a means of cure which you can employ in hysteric manifestations of every kind.

Electricity, metallotherapy, and cold douches have sometimes caused these contractures to disappear; in other cases they have resisted every kind of treatment, and have persisted for months and even for years. But whatever may be their intensity, they disappear momentarily under the influence of anæsthesia, when carried to completeness, or of energetic compression of the contractured member.

By the side of these contractures we must place paralysis, which appears and disappears with extreme rapidity. This paralysis, which often affects the inferior members, presents this curious peculiarity that it is not always accompanied by trophic disturbances, and you will sometimes see hysterical paraplegics recover in an instant the integrity of their motor functions. It is here that electricity and hydrotherapy may give unlooked for curative results.

As for the troubles of sensibility, I will not repeat what I said while treating of the neuralgias, and I will only say a word or two about anæsthesia. This is, as you know, a disorder almost constant in hysterical women, but one which gives them so little trouble, that a patient whom you observe for the first time will hardly call your attention to this loss of sensibility. I have seen patients presenting the strangest disorders of sensibility. I was the first to observe what I have described as *autographic women*,[1] and always it was

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[1] To Battey is due the chief credit of this operation, now known as Battey's operation. There are on record three cases, at least, where ablation of the ovaries resulted in permanent cure of hystero-epilepsy, recurring at the menstrual period; those of Battey, Peaslee, and Braun-Ferwald. Vide Battey, Atlanta Med. and Surg. Journal, September, 1872, and American Practitioner, October, 1875. Also, Peaslee, Transactions of the Amer. Gynecol. Soc., p. 340, 1876. Vide Hegar, Die Castration der Frauen, etc., 1878, pp. 13[illegible] 138.

[1] Dujardin-Beaumetz reported to the Societé des Hôpitaux, at their meeting on the 11th of July, 1879, the first case of an autographic woman. In this patient it sufficed to trace on the skin characters or lines, to see developed at the end of a few minutes a salient gyrus, corresponding very exactly to the tracings, which remained for some time, and which, at first limited and strongly defined, spread more and more, to be effaced at the end of four or five hours. The characters so traced were sufficiently prominent so that a wet-proof could be taken of them, as was done for the museum of the Hôpital St. Louis.

Since the communication of Dujardin-Beaumetz the number of autographic women has considerably increased, and this same modification of the vaso-motors has been found, not only in hysterical persons, but also in men and women free from all nervous disease. This symptom then is an urticaria, limited to the point of the skin on which the markings are made. Dujardinthe attentive examination of the patient, and never her declarations, which enabled me to detect these disorders.

At the same time the troubles of sensibility are important from the point of view of treatment, because when they disappear it may be affirmed that the patient will have no more attacks of hysteria. There exists, as I stated before, an intimate relation between the troubles of cutaneous sensibility and the convulsive phenomena. Metallotherapy, static electricity, the application of magnets, in short, all æsthesiogenous substances, may restore this sensibility, but generally this restoration is momentary.

Troubles of the special senses have been noted, and especially of sight. Charcot has pointed out the alterations of vision in hysterical patients, and I have myself observed, with Dr. Abadie, a very curious case of sudden amaurosis in a hysterical female, and which was speedily cured by the metallic applications.[1]

Gastric hysteria is one of the most formidable phases of this neurosis, for it interrupts nutrition, and eventually brings about such disorders as even to cause death. By the term gastric hysteria is understood all the gastric and intestinal disturbances which are observed in hysterical patients, from anorexia to incoercible vomiting. These vomitings may occur under two circumstances; either they succeed to that strange anuria, described by Charcot,[2] or else they come on without any antecedents sufficient to account for them. In the first class of cases you ought to respect these vomitings, as they are uræmic; in the second you ought to endeavor to arrest them. To the therapeutic rules which I gave you when speaking of the treatment of vomiting, I now add artificial alimentation [gavage] and electricity. Forced feeding has given me excellent results in certain cases, when used at the onset of the attacks. Ballet has observed similar facts in the service of Charcot, and you will find in the excellent thesis of my pupil Deniau a certain number of observations of a like kind, cases occurring in my hospital service. At the same time, if you expect success from "gavage," you must begin the treatment at a period not far removed from the inception of the gastric troubles, for, as Débove has judiciously remarked, these vomitings, when they have lasted a long time, produce such an enfeeblement of the organism that all medical intervention is well-nigh useless.

Apostoli has proposed to galvanize the pneumogastric during digestion, in order to prevent these vomitings. He requires the patient to take food; then immediately afterward he places the positive pole over the pneumogastric nerve on the right side, in the region of the neck, while the negative pole is held in the hand; then he passes a current of variable intensity, according as the nausea is more or less frequent. I have, by this means, employed in my service, seen digestion performed without rejection of the matters of the stomach. I shall not enlarge upon this therapeutic measure, which I fully treated of when lecturing on diseases of the stomach.

Such are the considerations which I wished to present respecting the treatment of hysteria. The therapeutic indications which I have furnished are far from being complete; at the same time I think them sufficient to enable you advantageously to combat the principal manifestations of this neurosis. But do not forget, gentlemen—and with these words I conclude—the complete cure of hysteria is very rare. You will hardly have triumphed over one of the many manifestations of this protean malady before others will make their appearance, and, notwithstanding all your knowledge, and all your energy, you will continually fail in the contest with these nervous troubles, ever renewed, and ever rooted in the depraved and insatiable imagination of the hysterical patient.

ORIGINAL ARTICLES.

ABSCESS OF TONSILS, PHARYNX, AND TONGUE,

WITH DISPLACEMENT OF PALATO-PHARYNGEUS MUSCLE, IMPEDING DEGLUTITION AND SPEECH, WITH NASAL REGURGITATION; OPERATION; RECOVERY.

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August 8, 1882, Miss P. F., of Colleton Co., S. C., aged twenty-one, six feet high, weight 136 pounds, consulted me for chronic disease of the throat, resulting from abscesses of tonsils, pharynx, and tongue, with displacement of the left palato-pharyngeus muscle, seriously impeding deglutition from nasal regurgitation, and impairing speech. She belonged to a family remarkable for their height and corresponding weight. Her father is six feet high, and weighs 280 pounds; her mother is rather taller than the average, and of medium size. She is the fourth of a family of ten children, four of whom are grown. The eldest son is six feet nine inches; the second son is six feet eight inches; the third (a daughter) is six feet three inches, and this one is six feet. At nineteen years of age, she weighed 197 pounds.

She gave the following history: In April, 1881, sixteen months ago, she had an attack of acute tonsillitis on the right side, consequent upon exposure to rain and cold in crossing a swamp, an accident having happened to the carriage in which she was travelling. The acute attack was followed by ulceration of the throat, which healed slowly, and from April to August she suffered intensely;

Beaumetz, note sur les troubles vaso-moteurs de la peau observes sur une hysterique, femme autographiqué, Bull. et Mém. de la Soc. Med. des Hôpitaux, t. xvi. 2e Serie, 1879, p. 197.)

[1] Vide Charcot, Troubles de la vision chez les hysteriqués, Progrès Médicale, 1878, p. 37. Bonnefoy, Des troubles de la vision dans l'hysterie (Thèse de Paris, 1874). Baron, Troubles de la vision chez les hysteriqués et les hystero-epileptiques (Thèse de Paris, 1877). Galezowski, Progrès Méd , 1878, p. 39. Dujardin-Beaumetz et Abadie, Hysterical Amaurosis, Amelioration by Metallotherapy and by Magnets; Complete Cure under the Influence of Static Electricity (Progrès Médical, 1879). The following is a brief résumé of this most interesting observation: Mlle. X., age sixteen, went to bed, January 21, with headache; had never before experienced any symptoms of hysteria; the next day, the 22d, she awoke totally blind. Examination of the eye by Abadie did not reveal any alteration of the fundus of the eye. There was loss of cutaneous sensibility on both sides of the body. Three pieces of gold were applied to the left temple, and in half an hour partial vision was restored on that side, but on the right side blindness persisted. Acuity of vision in the left eye, one-tenth. Magnets were applied, which ameliorated the right eye, and the sight of the left eye. February 5, acuity of vision was two-sevenths on the left, and one-fifth on the right. Each application of the magnet, or of metal, induced a state of lethargy; static electricity was then employed, and this completed the cure, and it has been permanent.

[2] Maladies du Syst. Nerveux, t. i. lect. ix. See also Ballet, Two Cases of Nervous Vomiting, Treated with Success by Forced Feeding (Prog. Méd., June 17, 1882). Deniau, De l'hysterie gastrique et de son traitement (Thèse de Paris, 1883). Huchard, Traite des neuroses, Paris, 1883. Fabre (de Marseille), De l'hysterie viscerale, Paris, 1882.

deglutition was imperfect, and fluids regurgitated through her nose. In August, she recovered, and was comfortable for about three months.

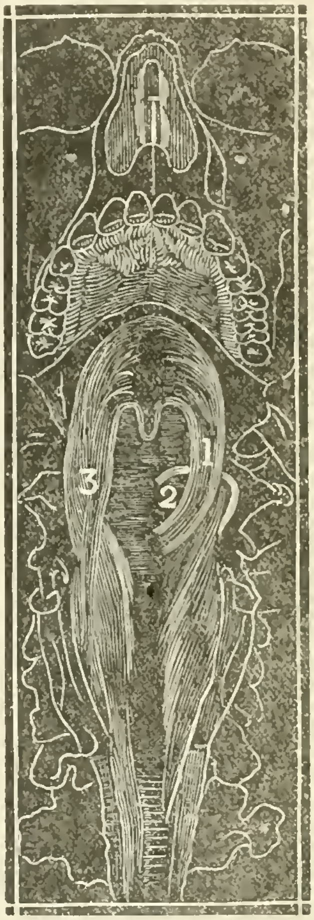
Early in November, an abscess formed in the left tonsil, extending to the side and back of the pharynx; dyspnœa, difficult deglutition, nasal regurgitation, and expectoration of pus and mucus, with cough, continued till May, 1882, when an abscess formed in the substance of the tongue on the left side, and finally opened by two orifices, one at the base of the dorsum of the tongue, the other near the tip on the under surface—both on the left side. After the abscess broke, she could pass her little finger from the anterior to the posterior opening. This was about three weeks in healing.

For six weeks, respiration was difficult owing to her swollen tongue, and at times suffocation was imminent; she could scarcely lie in the recumbent posture; she had constant earache; deglutition was impossible, and for forty-two days she fasted absolutely, and did not swallow anything, solid or fluid —not even water. On recovering sufficiently to be weighed, she weighed 115 pounds, having lost eighty-two pounds during her illness. The joke in the family was, "You are beating Dr. Tanner." Remembering Tanner's furious attack on the August water-melon after his fast, I asked what she took the first time she was able to swallow. She said she drank a pint of custard almost without stopping, and had since lived on custard, milk, and broths, but that the greater part of everything she took regurgitated through her nose. I know that this account of her fasting so long as forty-two days will naturally excite a derisive smile of incredulity; I will refer to it again.

She began to convalesce in the latter part of May, and I saw her first on the 8th of August following (1882). She was brought to my office in a carriage from the depot, and was so reduced and weak she could scarcely walk up the steps; her respiration was short and painful; her breath offensive as she entered the room; her coughing and spitting of mucus and pus incessant; her articulation nasal, and hard to be understood. It was painful to look at her huge, emaciated frame; she looked like a bag of bones in her clothes.

It is common to hear patients say, "They tell me I have a curious looking throat."

This throat *was* "a curious looking throat." Upon examination, there were two large cicatrices on the left side of her tongue as large as a five cent silver piece, one on the under surface near the tip, the other on the dorsum near the base. This half of the tongue was atrophied and smaller than the other, and partly paralyzed. The left tonsil was enlarged, indurated, honey-combed, and studded with ulcerations; the left palato-pharyngeus muscle was dissected up from the walls of the pharynx, and attached simply by its two ends, one to the palate as usual, but the lower end was displaced, and was attached to the middle of the pharyngeal wall, bulging forward like a piece of ribbon, drawing the palate slightly to the right side. A curved probe could be passed behind it, as in the musculi pectinati in the ventricles of the heart. (See figure.)



1. Left palato-pharyngeus muscle, separated from wall of pharynx, and attached by its two ends to palate and the middle of the posterior pharyngeal wall.
2. Probe passing behind palato-pharyngeus muscle.
3. Right palato-pharyngeus muscle—normal.

(Modified after Cohen.)

This formed a sort of pouch, extending downward to the epiglottis, filled with offensive mucopus, which prevented an inspection of the laryngeal opening with the laryngeal mirror.

Upon cleansing the parts, this pouch was rapidly refilled. I failed to get a view of the epiglottis for several days, and when I did, half of it had been destroyed by ulceration, and the borders and upper surface of the remaining portion were ragged, and covered with ulcers.

The right tonsil was enlarged, indurated, and of almost cartilaginous hardness, projecting beyond the half arches, and adherent to both of them.

The whole wall of the pharynx was thickened and ulcerated as far down as the epiglottis. The throat was very irritable, and the examination was difficult, painful, and prolonged.

The condition described as existing in the tongue and throat will, I think, readily explain the regurgitation of fluids in deglutition, the impairment of speech, and the nasal twang of the voice, as well as the constant cough and expectoration of mucus and pus. She said she spat up a pint of "stuff" a day, and from what I witnessed during the consultation, the quantity was scarcely exaggerated. At this visit I induced the patient to swallow water; she did so unwillingly; the greater part of it came out of her nose, and produced painful choking and cough. I also weighed her in the express office below my own (the subsequent weighings were made on the same scales); she weighed 136 pounds. Her weight before her illness, she said, was 197 pounds; afterwards, when convalescence began, it was only 115 pounds—a loss of 82 pounds—so she had recovered about 21 pounds.

Owing to the irritability and ulceration of the throat, little could be done, except to preserve cleanliness, and educate the throat for future manipulation. This was effected by spraying the parts with the following solution:

R.—Sod. carb.,	
Sod. borat., ...	āā dr. 2.
Glycerin, ...	oz. 1.
Liq. sod. chlor., ...	oz. 1.
Aq., ...	oz. 8.

She was provided with a Johnson's Patent Improved Atomizer, with instructions to draw the tongue forward, and spray the pharynx every two or three hours, and to have the throat mopped with the following, after each application of the spray:

R.—Iodin., ...	gr. 12.
Pot. iod., ...	gr. 24.
Glycerin, ...	oz. 4.

She was told to gargle her throat repeatedly with warm water, so as to soften the indurated parts, and to take maltine with quinine, iron, and strychnia. Her diet was to consist principally of milk and custard.

Her aunt, an efficient nurse, carried out these instructions faithfully, and I attended to her once a day at my office.

August 28.—The effect of this treatment was soon apparent. To-day I took the following note: The secretion and expectoration of muco-pus have greatly diminished; it still collects in the pouch, previously described as formed by the displaced palato-pharyngeus muscle; the breath is less offensive; the irritability of the throat has lessened, permitting the free use of instruments without gagging; the induration and ulceration of the pharynx have improved; she swallows more easily, but still has regurgitation through the nose, though with less spasm and cough. Her condition on the whole is far more comfortable, and her strength is slowly improving.

29th.—To-day, assisted by Dr. Davega, of the hospital staff, I operated upon the displaced palato-pharyngeus muscle by dividing its inferior attachment from the middle of the pharynx, and united it to the side of the palato-glossus, by paring the adjoining surfaces of both muscles, and uniting them by three silver sutures. (It was found impracticable to unite it to the pharyngeal wall.) The operation was very tedious.

The effect of cutting this muscle was first to destroy the pouch in which the mucus and pus collected—my chief object; but the palate was drawn further over to the right side by the antagonistic muscle, and the regurgitation through the nose, which had diminished somewhat as the general irritability of the throat had lessened, again increased for several days. I at first apprehended that I had done more harm than good.

Sept. 3.—Union not having taken place, the sutures were removed, and the severed muscle contracted in a few days close up to the palate. To-day I removed the enlarged right tonsil, liberating the half arches, to which it was united by adhesions. The tonsil was of almost cartilaginous hardness, and the bleeding was very free. In washing her mouth with cold water to stop the hemorrhage, she swallowed a small quantity without regurgitation, and quickly remarked, "I can swallow now," and soon afterwards drank a tumblerful of water without regurgitation, for the first time in many months. On the following morning, she ate bread and milk and hominy, and from this time had no further trouble in swallowing ordinary food. She rapidly improved in flesh and strength; her appetite was enormous for weeks. Her weight steadily increased—sometimes as much as five pounds in a week. In four months her weight increased from 136 pounds to 180 pounds, an average of about three pounds a week. The last time I saw her weighed was in March, 1883, and she had reached 192 pounds, five pounds less than her weight (197 pounds) prior to her illness, which began in April, 1881. She was kept under observation till January, 1883, and has since continued to come occasionally for inspection, the treatment previously adopted being continued at home. She has now entirely recovered; the pharynx and tonsils, however, have a rugged appearance, being filled with elevations and depressions, the remains of former ulcerations, and nearly half of the epiglottis is wanting. She speaks distinctly, but with a decided nasal twang.

This case presents peculiarities of interest in an anatomical, physiological, and pathological point of view rarely met with.

I have carefully adhered to the facts as stated to me prior to my seeing the patient, and to the subsequent operations, treatment, and progress of the case, because I know that some of these statements will appear to those who did not see the patient very remarkable.

The dissecting up of the palato-pharyngeus muscle from its attachments, except by its two ends, is unique, but is easily explained by a glance at the throat. When the abscess formed in the left tonsil in November, it burrowed in two directions, to the side and behind the pharynx, under the muscle and mucous membrane, and opening about the middle of the pharynx, and forward under the palato-glossus to the base and side of the tongue, discharging by two orifices, as before mentioned, through the substance of the tongue, resulting in partial atrophy of that side. Its subsequent division and atrophy prove that the act of swallowing can be performed without this muscle, and that, too, without nasal regurgitation.

Nature, as we well know, often supplies her deficiencies by compensatory devices, but here, in such a changed and thickened condition of all the structures of the pharynx, it is difficult to see how the deficiency of this muscle could be supplied. It could not act in conjunction with its antagonist of the opposite side, and there could be no approximation of the posterior half arches; hence, nasal regurgitation in swallowing.

In connection with the regurgitation through the nose, I ascribed it at first, chiefly, to the displaced palato-pharyngeus muscle, but, on dividing this muscle, the difficulty was increased, and I was at first fearful that I had done harm, though its division was necessary to destroy the pouch.

Five days afterwards, when I removed the indurated right tonsil, and liberated the half arches on the right side. regurgitation ceased promptly, showing that the non-contraction of the palato-glossus and palato-pharyngeus of the right side were chiefly the cause of the difficulty. This had entirely escaped my observation.

Remarks.—In regard to the fasting forty-two days and nights, and *without water, too*, I will only say that it was impossible to listen to the plain, modest account of this young woman, of her sufferings, her thirst, and hunger, her fits of suffocation and strangulation, her prayers for death to give her relief, without believing that she was telling what she believed to be true. An examination of her mouth, throat, and larynx confirmed her statement of the repeated abscesses and ulcerations which she said she had had; this was confirmed by her parents, who are reputable persons. There was no hysteria in this case: a woman of nineteen years of age, six feet hight, and weighing 197 pounds, is not likely to have hysteria; there was no publicity given in the neighborhood to "the long fast;" there was no object in deception; "there was *no money in it*." Her sufferings were fearful; she could not disguise them; she wanted to die, and prayed for death; her family would have been relieved by her death. She did not relate all this at first; on the contrary, she was modestly reticent. It was not until she had begun to improve, and her throat was so educated as to permit me to see by the aid of the laryngoscopic mirror the fearful ravages of the disease which she had undergone, that, in answer to my question of astonishment how she had managed to swallow at all, she said, "I know you will not believe me, but nothing passed my lips for forty-two days, not even water." The physician in attendance, who, I know, is an estimable gentleman, was separated by a distance of twenty miles from the patient, and only visited her at long intervals, and expected her death daily. He told me that he could not testify, personally, to the extent or length of "the fast," but that there were weeks together when he believed deglutition impossible from the condition of her throat, involving pain, choking, and strangulation, and that he regarded the patient and her parents as entirely reliable. Her family thought she had cancer of the throat, and that the case was hopeless.

Nearly all cases of long or pretended long fasts have occurred among women of delicate constitution, and are usually associated with some form of hysteria, and accompanied by wonderful accounts of absence of hunger and thirst, with long trances, and after detection it has always been found that the deception was carried out with the connivance of the family.

The world at large, and the medical profession, too, are divided about Dr. Tanner's fast of forty days, two years ago. Probably as many people believe it as there are who do not believe it.

It was said at the time that Tanner lost seventeen pounds by weight, and that, after the fifteenth day, he drank as much water as he wished, which sustained him, or seemed to assist him to a surprising extent. Supposing that Tanner's fast was honestly carried out with the assistance of water after the fifteenth day, and that he did fast forty days with a loss of seventeen pounds, he was a weak, delicate man; eccentric, but possessing a powerful will, with all his faculties, mental and physical; he had an object, and accomplished it, and risked his life foolishly.

Remembering this, suppose that a young healthy woman, six feet high, weighing 197 pounds, in possession of her mental faculties, but physically unable to swallow, suffering intense agony, hunger, and thirst, and wishing for death, says she survived forty-two days without food or drink, with a loss of eighty-two pounds in weight, and after recovery regains her original weight, within five pounds, in four or six months, and that this statement is substantiated by disease of the throat, which appears to have prevented deglutition, and that all this is confirmed by reputable persons, who have no object in conniving at fraud, and nothing to gain by a false statement. Is this possible?

ON THE VALUE OF THE MOIST-SPONGE DRESSING IN JOINT-AMPUTATIONS. A SUCCESSFUL CASE OF AMPUTATION AT THE KNEE.

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Amputation for disease done in the continuity of a limb is so often followed by the necessity of re-amputation that the question of amputation at the contiguity, or joints, presents itself to the mind of the operative surgeon as a subject of weighty consideration.

The impossibility of ascertaining the limit to which a morbific process in a long bone has extended, even after the bone itself has been laid bare to view, and the unvarying teaching of experience which goes to show that when once the medullary substance in a shaft of a long bone is involved, the cell contamination is likely to extend to the articular cartilages, are important factors in deciding upon applying the knife at the joints to free patients from further annoyance and the distress of a subsequent operation.

Statistics, although for the most part of a fancied value in surgery, furnish a favorable view, which might substantiate the above conclusion.

The impression that exposure of an articulation implies extensive suppuration and exhaustive drainage has done much to keep joint-amputation in the background.

I believe that the chief trouble in the management of wounds liable to considerable suppuration is mainly due to the ordinary surgical dressings; and as the *moist sponge*, of which I am a warm advocate, is so simple in its use, and obviates the retention of any discharges within a wound, I shall hope to gain for it a trial at the hands of others by the recital of its satisfactory employment in the following case of *amputation at the knee-joint*, which I performed on the 29th day of April, 1882, at the Philadelphia Hospital:

The patient, Rose Donelly, aged 44 years, had been affected with an epithelial cancer, which sprung from a cicatrix over the tibia and finally involved the bone, so that amputation was done on the previous January 4th, by one of my colleagues, just above the site of the disease. The remaining portion of the tibia afterwards proved to be diseased, and the patient suffered great pain in the stump, on account of which I operated at the knee, by the oval flap method, retaining the patella and avoiding making the lateral incisions too high upon the condyles of the femur, so as not to interfere with the attachment of the femoral fasciæ and muscles. The ligamentum mucosum was also preserved, so that the patella was retained in position between the condyles. After ligaturing the popliteal and sural vessels, the edges of the wound were carefully approximated with silver wire, and a large soft sponge (previously soaked in carbolized water 1–40) was applied directly to the part, and held in position with broad bands of adhesive plaster, extending diametrically across the sponge and along the thigh, so as to exert equable compression upon the deep as well as the superficial structures. The ligatures were brought out at the most convenient points, and their ends embraced in the grasp of the sponge. There was no external or other dressing applied, except that a light roller bandage was run up the thigh to control muscular spasm, and the thigh itself slightly elevated upon a pillow of oakum. This dressing was not disturbed for twenty-four hours, when it was removed, and afterwards reapplied daily. One of two sponges was used alternately, and kept constantly moistened with carbolized water (1 to 40), while the other was soaking in the solution. At each removal, all the discharges were found within the meshes of the sponge, and the appearance of the wound was satisfactory, except upon the fourth day, when it became erysipelatous (from contamination of an outbreak in the ward). This was combated by wetting the sponge with a solution of sulphate of iron (grs. x, aqua ʒj), and the progress of the case was thereafter uninterrupted towards recovery, which was completed with firm cicatrization and entire cessation of discharges on May 20, three weeks from the date of operation. The temperature reached 100° the first night, and 101° on the fourth night, but with the subsidence of the attack of erysipelas, fell to normal, and remained so throughout the rest of the treatment.

The stump is now firm, and well adapted to the use of an artificial limb. No pain whatever is experienced in it. The patella remains between the condyles of the femur, and there is excellent forward motion, due to the preservation of the function of the extensor quadriceps femoris muscle.

Broad and Spruce Sts.,
March, 1883.

MEDICAL PROGRESS.

Ergot as a Preventive of the Aural Troubles Occasioned by Quinine and Salicylate of Soda.—In three cases of acute articular rheumatism, Schilling has observed that the prolonged administration of salicylate of soda in doses of ℈vss–ʒijss a day, causes permanent aural trouble. The membrana tympani was thickened and of a cloudy aspect. A fourth case, which in two successive days had taken single doses of grs. xxx of sulphate of quinine, became subject to roaring in the ears and deafness. This is not an unfrequent effect of quinine or the salicylates administered in large doses, and Schilling proposes to administer ergot with these drugs in order to prevent this vascular paralysis: for example he gives the following: Ergotine grs. xv, salicylate of soda ʒijss, water ℥vj. S.—A large spoonful every hour. Of eighty-seven patients who have taken this prescription, three-fourths have had no aural symptoms, and the same was noticed in nine other patients who took quinine and ergotine in equal parts. This mixture will be equally preventive of the amblyopia which sometimes follows large doses of quinine.—*Progres Méd.*, June 9, 1883.

Verbal Blindness.—Aphasia presents itself under such a variety of forms, and in such complexity of combination, that there can be no more difficult subject in the whole range of neuro-pathology or psychology. We have obviously used the term in its widest sense as synonymous with disorder of every kind of the faculty of employing verbal language. The following case of what M. Küssmaul would term verbal blindness is reported at length, but still with insufficient detail in some noteworthy points, in the *Gazette Médicale de Paris* of June 16th. A man of business, aged thirty-five, was suddenly seized whilst in the hunting-field with right hemiplegia and aphasia. He had been the subject of severe migraine, but with that important exception had enjoyed good health. Consciousness was lost a few minutes after the hemiplegic seizure. At no time was loss or impairment of ordinary sensation detected. Both the paralysis and the loss of speech were on the mend, when one day the patient wished to complete a letter which he had already begun, and found to his astonishment that he was unable to read what he had written but a few days before. Later on it was discovered that an inability to read printed matter also existed. The letter in question when compared with one dated three years back exhibited no special difference. In talking only occasionally did the patient substitute a wrong word. When seen by Charcot, five months after the onset of the seizure, no important defect remained except right lateral hemiopia and the inability to read. The hemiopia had been indicated by the fact that in attempting to play billiards the ball was seen to be but half a sphere. Acuity, however, in the other part of the field of vision was normal, so that the letters could be *seen*, though not read. Loss of memory for a certain number of substantives and proper names, including those of the streets of Paris, existed. He did not venture alone in the city because of the last defect. He could write his name, his address, and even a long letter, without any important errors, but he could not read what he had written. In order to decipher a word he slowly formed each letter of the term with the tip of his right forefinger, and then the ideas furnished by the movements of his fingers came to his aid and controlled the incomplete, insufficient visual impressions. In the phraseology of Dr. Bastian, the defective action of his visual word centres was helped out by the almost simultaneous activity of the *kinæsthetic* word centres. M. Charcot has utilized, from a point of view of treatment, the help afforded by this *muscular sense*. So much progress was made that whilst at the beginning of his reëducation it took one hundred seconds to read one line of print, after sixteen days twenty-seven seconds sufficed to accomplish the same task.—*Lancet*, July 7, 1883.

Papaine.—Papaïne, or vegetable pepsin, is a milky substance extracted from the stems and green fruit of the *Carica papaya*, an indigenous tree of South America, the Indies, and the Molucca Islands. The exudation of the green fruit and the seeds themselves are very efficient vermifuges. But the most valuable property of the tree is the extract, which contains a large proportion of a principle analogous to animal pepsin, which Wurtz and Bouchut call *vegetable pepsin*. This substance rapidly softens and digests muscular fibre. The emanations of the trees produce this effect on flesh, and in countries in which the papaya grows the inhabitants suspend meat which they wish to grow tender in its branches. M. Wurtz, in a report to the Academie des Sciences (Nov. 15, 1880), asserts that papaïne dissolves two thousand times its weight of fibrin, acting with the rapidity and regularity of the best animal pepsin. Dr. Berthaud says that in the laboratory papaïne is constantly used, and numerous facts prove that its action is certain and constant, and its use enables the experimenter to avoid the adulteration so often met with in animal pepsin. Wurtz and Bouchut have observed that all azotized material, as milk, meat, and fibrin, is digested by the papaya juice in a much larger quantity than by the pepsin of the stomach, and it has the advantage over animal pepsin of dissolving azotized matter as well in an acid as in a neutral or alkaline medium. Papaïne has the same indications for administration as animal pepsin. MM. Trouette and Perret, of Paris, have made five preparations of papaïne—syrup, elixir, wine, cachets, and pills—the general effect of which is equally constant, and which may be administered according to the age, temperament, and taste of the individual.—*L'Union Méd.*, June 10, 1883.

Electrical Current in Pemphigus.—De Amicis relates a case in which the pemphigus was localized on the inner surface of the right leg. The nutrition of the part had suffered; there was marked emaciation; muscular contraction kept the limb half flexed; the skin was covered with thick flakes of epidermis colored greenish-yellow; beneath this the surface was either rose or dark red; here and there were blisters and denuded points. Various methods of treatment, both local and constitutional, had been tried without effect, such as arsenic, iron, quinine, continuous warm baths, emplastrum diachyli, ointment of chrysophanic acid, etc. De Amicis prescribed electricity under the form of alternate induced and constant currents. The *seances* lasted about ten minutes. The results exceeded all expectation. After less than twenty-six sittings all new eruption of bullæ had disappeared. Soon the affected limb had regained its former size, the contraction ceased, the skin recovered its natural hue, and the flakes which fell off were replaced by a branny desquamation. The patient unfortunately resolved to leave the hospital before the cure was complete.—*Edinburgh Med. Journ.*, July, 1883.

Salicylate of Bismuth in Typhoid Fever.—Prof. Henri Desplats, after a careful study of the antipyretic action of carbolic acid, salicylic acid, salicylate of soda, and resorcine, has demonstrated that these agents have an influence on the temperature and other elements of fever, whatever may be the nature and cause of the fever (typhoid, puerperal, variola, intermittent fever, erysipelas, rheumatism, pneumonia, etc.); that this action is sure and prompt when these drugs are administered in sufficient quantities; and that it is quick, causing rapid elimination. He then studied the accidents which these agents have been said to produce (collapse, convulsions, albuminuria, melanuria, etc.), and has established that they do not cause pulmonary congestion or renal lesions, and may be administered in albuminuria; that, if administered in too large quantity, they may cause collapse, but this collapse is rare and not dangerous; that in very rare cases, when given in enormous doses, they will cause convulsions, but these have never terminated fatally.

He now gives the results of his experiments with salicylate of bismuth in typhoid fever. He has administered it in twenty cases. It is more readily taken than salicylate of soda, being less soluble, and, therefore, of less pronounced taste. It consists of salicylic acid 2 parts, bismuth 1 part, although it keeps more readily if there is an excess of 3–4 parts in the 100 of salicylic acid. It may be given in unleavened bread or slightly aromatic syrup of acacia, in doses of grs. xv–xxx, though he has given from ℈iv–ʒijss in a day. A little seltzer water may be given immediately after it to enable the stomach to retain it better, if that organ be very irritable. It is always advisable that a more or less considerable quantity of liquid be drunk after each dose. The effects obtained are of two kinds, *immediate* and *remote*.

The *immediate effects* are comparable, when the dose is sufficient, to those produced by carbolic acid, resorcine or salicylate of soda. To observe these, the patient should be closely watched, and the variations of temperature noted. Vulpian's statement that the temperature does not rapidly abate is erroneous, as M. Desplats shows by several cited cases. The immediate effect is never wanting when the dose is sufficient. It produces a less abatement of temperature than carbolic acid, but the sudden rise so often seen after the abatement from carbolic acid, is not observed. Beside the immediate effects, salicylate of bismuth has an incontestable action on the general temperature-curve. As has already been noted by Vulpian, the morning fall of temperature is greater, especially when no salicylate has been administered during the night. Desplats has several times observed that the temperature continued to abate during the forenoon, when the patient had taken no medicine, and thinks it very likely that these late effects are due to absorption of the drug, which is not very soluble. Sometimes, instead of a fall of temperature, he has noticed abundant perspiration coming on during the forenoon, long after the last dose of the salicylate; this seems to confirm the hypothesis of late absorption.

Remote effects.—It is important to know what action the salicylate of bismuth, regularly administered, exercises on the evolution and termination of the disease. Twenty cases are not sufficient from which to draw general conclusions, but they may be of service in drawing conclusions from an additional number of cases. Desplats divides his cases into three groups:

the first includes the cases in which the fever was arrested, in which it may be said that the drug had an abortive action; the second group includes those cases in which the effect was signal, but not so marked; and the third, those cases which were rebellious to treatment, either terminating in death, or seemingly uninfluenced by the drug. Eleven cases are reported in which it had an abortive action. Vulpian has already observed one case in which the fever was arrested on the fifteenth day by salicylate of bismuth. He hesitated to attribute this effect to the drug, as the rose spots were absent. This does not negative the diagnosis of typhoid fever, however, as cases do occur in which the rose spots are absent. Four cases are recorded in which the action of the salicylate was less pronounced; and five cases, all very severe, two recovering, in which there was no apparent effect. In all, twenty cases are recorded. Epistaxis was a rare symptom, and was in no case abundant. Intestinal hemorrhages occurred in two cases, one of which recovered. Delirium was rare, in one case being attributable to the medicine; this was rather subdelirium than true, and there was also deafness. When large doses, ʒij–ʒijss, were given in three or four hours there was, in some cases, a depression of the vital forces, which passed off when the drug was discontinued. The best results were obtained with doses of ℈iv–ʒjs. —*Bulletin Gén. de Thérap.*, June 20, 1883.

Transplantation of Muscle in Man.—Helferich (*Archiv f. klin. Chir.*, Bd. xxviii. p. 562) reports a case in which, as a result of the removal of fibrosarcoma from the arm of a woman aged thirty-six, the whole upper half of the biceps, with the exception of a thin strand at its outer part, was extirpated. Into the cavity which was left he promptly introduced a large fragment of the biceps from the leg of a dog. The cut surfaces were carefully brought together with sutures, as little injury as possible being done to the parts. The transplanted muscle was much more voluminous than the original portion, and was long after the operation distinctly perceptible to the touch. Electric experiments instituted about three months after the operation showed that the biceps reacted perfectly naturally to both kinds of current. The high point of stimulation situated at the place of section of the musculo-cutaneous nerve was, however, absent. The movements at the elbow-joint were almost normal.—*Lancet*, July 7, 1883.

Relations between Ovarian Tumors and the Broad Ligaments.—M. Terrillon has operated on three cases of ovarian tumors which had prolongations extending into the broad ligaments. He has observed that the development of ovarian tumors into the broad ligaments may be (1) anteriorly and posteriorly, and (2) into the concavity of the sacrum. The broad ligament is hypertrophied, contrary to what is seen in the case of parovarian cysts. The prognosis is more grave than in cases of cysts without prolongations. As regards decortication, Péan and Kœberlé are in favor of it; Karl Schrœder prefers to leave a part of the tumor rather than decorticate. If this is done, however, a fatal peritonitis may be set up. Terrillon makes a distinction according as the adhesions are loose or close. If loose, decortication may be practised, and the two folds of the broad ligament are sutured. If the adhesions are fast, decortication is impossible, and in these cases the borders of the cystic cavity are sutured to the edges of the wound; free drainage is established in all the prolongations, so as to completely disinfect the whole wound. According to him, decortication is preferable where practicable.—*Journ. de Méd. de Paris*, July 7, 1883.

Itching as a Symptom of Bright's Disease.—During the course of Bright's disease, itching is experienced unconnected with any cutaneous eruption, and sometimes invading every portion of the integument.

2. This symptom may be described as occurring in three different forms: 1st, as itching, properly so-called; 2d, as horripilation; 3d, as formication.

3. These sensations are a frequent accompaniment of Bright's disease; they are complained of at various periods; they may be felt both at the outset and during the course of the confirmed malady.

4. When met with at the commencement, they rank as an important symptom and one of great semeiological value; they coincide, at this period, with the pollakuria, the cramps, the palpitations, the disorders of hearing, the epistaxis, etc., and may precede the appearance of œdema and albuminuria, thus serving, without any other aid, to place the physician on the right diagnostic track.

5. Coming on at a later period, they merely constitute an additional and conjoint symptom of the disease.

6. The pathology of this phenomenon is as yet based upon hypothesis. It represents a disorder of the sensory sphere, due, probably, to the irritation produced at the terminal extremities of the nerves by refuse material retained in the blood through failure in the eliminative functions of the kidneys.—*Journ. of Cutan. and Vener. Diseases*, July, 1883.

Relations between Locomotor Ataxia and Syphilis.—Dr. F. de Ranse, in concluding a paper on this subject, draws the following conclusions:

1. Progressive locomotor ataxia is primary or secondary. One sometimes observes, in the course of other cerebro-spinal affections, accidental tabetic symptoms of characteristic type, due to propagation of lesions along the external bands of the posterior cords, which cannot be said to constitute progressive ataxia.

2. Pathological anatomy shows that tabetic symptoms of that kind often supervene in the course of cerebro-spinal syphilis. It is admissible, if not demonstrated, that under the influence of this primitive and extrinsic irritation of the posterior cords, and in virtue of a special predisposition, a secondary locomotor ataxia may be developed. But pathological anatomy shows a line of demarcation, between the syphilitic and tabetic processes, which prevents us considering primary sclerosis of the posterior cords as of syphilitic origin, or accepting the doctrine of a primary specific ataxia.

3. These proofs of pathological anatomy are by no means weakened by the statistics produced in favor of the specific character of locomotor ataxia; they are still insufficient, subject to numerous objections, and need further evidence.

4. Nor are these proofs of pathological anatomy weakened, but rather confirmed, by the results of specific medication in locomotor ataxia.

5. The antisyphilitic treatment, incontestably useful in cases of ataxia symptomatic of cerebro-spinal syphilis, and perhaps at the onset of the secondary form, may be positively injurious in the primary form. Hence it should be prescribed with caution in tabetic cases.—*Gazette Méd. de Paris*, April 28, 1883.

Phosphorus in Osteomalacia.—Dr. W. Busch reports two cases of osteo-malacia treated by phosphorus. The first patient was a fairly healthy-looking woman, thirty years of age, in whom the disease appeared a few weeks after childbirth. The objective signs were confined to the bones of the pelvis. This presented the appearance of having been pressed together from the sides. The symphysis projected forward like a beak, while the horizontal rami of the pubes were sharply bent. Walking was impossible, the patient being able only with the greatest difficulty to move from the bed to a chair. Absolute rest in the horizontal position was ordered to be maintained for three months, and Wegner's phosphorus pills were prescribed. After five months' treatment, the patient was able to go up and down stairs without difficulty. At this time she changed her residence and passed from under observation. The second case was that of a woman, fifty years of age, who complained of intense pain in the right arm near the insertion of the deltoid muscle. A diagnosis of ostitis was made and the ordinary measures were prescribed. No improvement was noticed, and after several weeks the patient abandoned the treatment. In about nine months she again came under observation. She was then reduced almost to a skeleton, was absolutely unable to walk, and was greatly deformed. The dorsal spine was kyphotic, while the cervical spine was so strongly lordotic that the head seemed to rest between the shoulders. The thorax was distorted, the femora were bowed, and the pelvis presented the characteristic deformity of osteomalacia. The patient was confined to the bed for seven months, and took Wegner's pills for a year and a half. At the end of this time the bones were firm, and she could go about without complaint. The deformity had not decreased. The following is the formula for Wegner's pills:

℞.—Phosphori, ...	gr. ⅓–ss.
Syr. simpl., ...	f ℥ij.
M. bene et adde	
Pulv. glycyrrh. rad., ...	ʒijss.
Pulv. gummi arab., ...	℈iv.
Gummi tragacanth., ...	℈ij.
Ft. pil. 250.	

Each pill contains about $\frac{1}{650}$ grain of phosphorus. The dose is one pill twice a day, to be gradually increased. Busch does not consider the drug to be of any value in rickets or caries.—*Practitioner*, July, 1883.

Relation between Flexions of the Uterus and Nervous Affections.—Dr. H. T. Byford, in a paper on this subject, read before the Chicago South-side Medico-social Club, draws the following conclusions:

1. There is some direct relation between flexure of the uterus and hysterical symptoms, especially the melancholia.

2. This form of melancholia is not dependent entirely upon occlusion, for in some cases there is neither occlusion nor dysmenorrhœa. I have a case of a primipara, with anteflexion without occlusion, whose life was perfectly miserable from despondency, fainting spells, excessive irritability, and foreboding of trouble, who experienced no relief from tonics, local stimulants, or glycerine plugs, but whose nervous symptoms improved from the first introduction of an elm bougie. Ammoniated tincture of valerian had afforded temporary amelioration.

3. That the peculiar dilating or rather straightening action of the elm affords much relief.

4. That the beneficial action of the slippery elm bougie is not merely one of stimulation, for, in some cases, the symptoms are worse until the stimulation has subsided, as in the case of Mrs. D. and many others. I have known cases in which the bougie increased the local discomforts, and yet caused improvement in the nervous condition after its removal.

5. That congestion in any part of the uterus is not a constant factor, for in the first case cited there was no sign of any congestion.

6. That ovarian irritation is not the cause of this kind of hysteria, for the bougies could not relieve ovarian irritation so promptly, since they have rather an irritating than soothing effect upon the pelvic organs.

7. Dragging of the uterus upon the ovaries through the broad ligaments is not the cause either, for the change produced in the position is scarcely appreciable at first, and not comparable, the change constantly being produced by the filling of the bladder.

8. That the iliac pains accompanying anteflexion are not of ovarian origin.

9. That pessaries do not afford as decided relief to the general nervous symptoms as elm bougies.

10. That cutting operations, which endanger the life or health of the patient, are unjustifiable for stenosis until gradual dilatation of this kind has been tried.—*Weekly Medical Review*, July 14, 1883.

Removal of Carious Portions of the Vertebræ.—Dr. Böckel relates the history of a case in which he removed the carious portion of the bodies of two dorsal vertebræ by means of the sharp spoon, with gratifying results. From his experience in this case and in operations upon the cadaver, the writer concludes that it is not so difficult as is usually supposed to reach the anterior portion of the spinal column. The resection of an inch to an inch and a half of one rib affords room enough for the finger to reach the bodies of the diseased vertebræ. The danger of wounding any of the great vessels lying in front of the spinal column is not so great as it seems, as the pus has already formed a sinus which serves as a guide to the diseased bone. The bodies of the lumbar vertebræ may be reached by an incision made at the outer border of the sacro-lumbalis muscle, as for nephrotomy. The same operation is indicated in gunshot wounds of the vertebral bodies. The difficulty in such cases lies less in the operation itself than in the uncertainty of the diagnosis respecting the location and extent of the injury to the bone.—*Practitioner*, July, 1883.

Unilateral Retinitis Albuminurica in a Patient with but One Kidney, Diseased, on the Same Side.—Yvert reports the following rare case in a Spaniard, æt. 43, who had had most of the subjective and objective symptoms of parenchymatous nephritis, and in whom the right eye remained absolutely intact throughout the entire course of the disease. In the left eye there were the usual yellowish-white masses of exudation in the retina, beneath the vessels in the region of the macula, and between the latter and the disk. There were numerous punctate hemorrhages, and some larger extravasations. Vision was not much affected when the patient first came under observation, but subsequently was almost entirely lost. After he had been under treatment about six weeks, the vision improved almost to the normal standard, and there was a considerable diminution of the retinal exudation. He subsequently, however, grew very much worse, the vision was again nearly lost, and the patient died in about ten weeks from the time that he first came under observation. At the autopsy the right kidney was found to be entirely absent, there being not a trace of kidney, artery, vein, or ureter, though the supra-renal capsule was present in its accustomed place, and was of normal size. The place ordinarily filled by the kidney was occupied by a portion of the right lobe of the liver, enormously hypertrophied. The left kidney was in its normal position, was considerably hypertrophied, and presented the characteristics of the large, white, parenchymatous nephritis.—*New York Medical Journal*, July 14, 1883.

THE MEDICAL NEWS.

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SATURDAY, AUGUST 4, 1883.

IN order that our readers may have an intelligent idea of the area and location of the present cholera epidemic, we give, on another page, a very complete map of lower Egypt, showing all the principal towns at which the cholera has appeared. This map is so printed that it can be detached and placed in a position where it will be handy for future reference and study.

CHOLERA AND QUARANTINE.

WE print elsewhere the latest news of the progress of cholera, and our map shows the position of the infected localities. The disease is steadily progressing in Egypt, but as yet there is no evidence that it has reached Europe, for the cases reported in Havre, London, and Wales are evidently only the common sporadic cholera morbus, such as occurs every year.

It may be said, therefore, that the European Governments have had timely warning, and that the result will test the value of maritime quarantine as a means of checking the spread of cholera. It is generally admitted that inland quarantine and sanitary cordons are useless against epidemic cholera, but the value of maritime quarantine is not yet settled, though the prevailing opinion is that it is at all events worth trying. It has failed sometimes, it has apparently succeeded sometimes, and its success or failure appears to have depended very much on whether it was resorted to in time, and was properly enforced. For example, the appearance of cholera in Southampton, in June, 1865, was for a long time inexplicable, and it was not until several years afterward that satisfactory evidence was obtained that it had existed in Alexandria on the first of June, though it was not announced until the 11th, and during this time vessels had been going from Alexandria to Southampton without check.

Let us now consider briefly the European quarantine systems which are being opposed to it. In France these are regulated by the law of 1867, and the same methods are pursued by all the governments of Southern Europe, with minor modifications as to time of detention, etc., so that it may be called the Continental system.

Its essential feature is the detention of a suspected vessel with its passengers, crew, and freight for ten days' observation. The sick are separated from the well—both are removed from the ship. A suspected vessel is one coming from a port at which cholera exists, or one on board which cases of cholera or choleraic diarrhœa have occurred *en route*. Bedding and clothing are disinfected, but, as a rule, merchandise is not. The exceptions are second-hand goods, feathers, skins, and other things of like character. No special directions are given as to cleansing the ship. The quarantine officials have no discretion as to the time during which the well passengers are to be detained for observation; but if the vessel has a regularly commissioned physician, is in good sanitary condition, and has had no cases on board, the ten days' quarantine may be counted as commencing from the date of sailing from the port of departure.

The English system, as provided in a special order of the Local Government Board, dated July 12, 1883, is what is called a system of Sanitary Inspection, the essential feature of which is that there is little or no detention of persons not actually suffering from the disease, even though they may have arrived on an infected ship, and that there is no fixed limit of time for detention of the ship.

The order above referred to provides that, when any customs officer knows or suspects that a ship is infected with cholera, he shall cause it to be moored or anchored in a place to be selected by himself; shall allow no one to leave the ship; and shall at once give notice to the sanitary authority, who must have the ship examined by a medical officer of health, and this examination must be made within twelve hours, or the ship allowed to go free. If the medical officer of health decides that the ship is infected with cholera, he gives a certificate to that effect, whereupon the vessel shall be taken to a place selected for that purpose by the Port sanitary authority, and moored or anchored.

Every person certified by the medical officer of health to be suffering from cholera is to be dealt with by the sanitary authority under its local regulations.

The medical officer of health is to give directions for preventing the spread of infection, which directions must be carried out by the master of the ship. Articles soiled with cholera discharges are to be destroyed, and the clothing and bedding of those suffering from the disease are to be disinfected or destroyed.

Physicians will readily see that this English system affords very little security against the importation of cholera, and that the order has been framed in the interest of commerce rather than that of public health. Under this order the passengers not yet stricken down with the disease, in a ship containing a dozen or more cases of cholera, must be allowed to land and go where they please, although it is almost certain that within a week some of them will have the disease and become centres of infection. Nor is their baggage to be inspected or disinfected.

Too much is left to the discretion of the health officer, for the pressure on such an officer at such a time is enormous.

The defect of the Continental system appears to be an unnecessarily long time of detention, and not sufficient attention to the ship itself.

The quarantine systems of Boston, New York, and Philadelphia are intermediate between the Continental and the English plans; the well are detained a short time for observation, and the ship is emptied and cleansed as soon as possible.

England will take no precautions that will interfere with her commerce unless compelled to by the placing of restrictions on that commerce by other nations, and she is the chief source of danger to this country at the present time, so far as Asiatic cholera is concerned.

THE IMPROVED CÆSAREAN OPERATION.

THE disposition manifested to return to the old method of abdominal delivery in the management of labors in pelves extremely narrow in their measurements, has stimulated suggestions from many prominent quarters, with the object of increasing the safeguards and precautions against the ordinary dangers attendant upon it. These are proposed mainly in reference to the prevention of hemorrhage, the security of the wound of the uterus against gaping, the warding off of septic influences, and the ensuring of the greatest promptitude consistent with the proper performance of the operation. The various recent suggestions in these directions are very admirably set forth in a series of papers just completed by Dr. Garrigues, of New York, in the *American Journal of Obstetrics*.

In connection with these points, it is interesting to notice an operation recently (March 5th) performed in the Maternity of the Woman's Hospital of this city by Dr. Anna E. Broomall, Professor of Obstetrics in the Woman's Medical College. The patient was a negress, aged 22, with a conjugata vera of $2\frac{7}{10}$ inches, and a very exaggerated inclination of the pelvis, which increased the obstruction. She had been twenty-four hours in hard labor before she came into the Hospital, and attempts at delivery had been made by long-continued and vigorous compression and traction with forceps. At the time of the operation by Dr. Broomall, her temperature was 102° and her pulse 180, with offensive discharge of blood and shreds of tissue; but as the fœtal pulse was distinct, and the mother's condition not absolutely hopeless, the Cæsarean operation was adopted, as giving more chance to both lives than any other method. Craniotomy was inadmissible with the active signs of life in the child, and the Porro operation involved too much shock, and, moreover, her intelligent consent to be unsexed was not obtainable in her then condition.

The operation was performed with full antiseptic precautions as to assistants, instruments, and atmosphere. The main important feature was the adoption of the principle of the Müller-Porro operation, viz., the turning out of the uterus from the abdominal cavity, keeping the edges of the incision closely pressed against the uterine wall, and before incising the uterus making constriction of the cervix to prevent hemorrhage. This plan, first suggested by Litzmann, of Kiel, has been carried out heretofore in a few cases only, and without success, by placing a constricting band around the cervix, either a wire loop, or, as urged by Garrigues, an Esmarch rubber tube, tightened up until complete arrest of circulation is effected. Dr. Broomall, however, modified this portion of the operation in having the *cervix grasped by the hand of an assistant* and securely compressed until the uterine wound was closed by sutures. The hand was applied with its palmar surface upon the lower anterior face of the uterus, with the thumb and fingers extended with the commissure looking downward, then slid rapidly down until the soft tissue of the cervix could be grasped in its embrace, the head being gently pressed upward till the cervical tissues were entirely isolated from it. The softness of the cervical walls rendered an efficient grasp quite easy; and the circulation was absolutely controlled, there being apparently not a drachm of blood lost from the incision in the uterus. The placenta was implanted anteriorly and had to be cut through, causing of course the loss of its contained blood.

The advantage of this method of constriction was seen to be immense. First, there is great saving of time, and that too at a period of the operation when every moment tells upon the vitality of the fœtus.

The difficulty of passing a cord or ligature of any kind over and behind the uterine body, carrying it down between the womb and the edges of the incision—which have to be kept closely in contact to prevent the escape of the intestines—and the care necessary to prevent loops of intestine and portions of omentum being carried down and grasped by the ligature, contused and perhaps permanently injured by the rough constriction, constitutes one of the serious delays in the Porro operation; and the manipulation necessitated by it, disturbing the placental circulation, involves great danger to the child. With the manual grasp, the fingers being gently slid around the cervix from in front and kept close to the uterine wall, such precautions are unnecessary, and the whole constriction is done instantaneously. In Dr. Broomall's case, it was less than fifteen minutes from the time the peritoneal cavity was opened until the uterine wound was completely closed, and in ten minutes more the abdominal walls were closed also, making only twenty-five minutes in all that the abdomen was open. Second, a very important gain by this procedure is in the diminished risk from injury of the uterine tissues or the broad ligament and its appendages by their grasp in the soft hand, with its well-regulated and intelligent pressure, in contrast with their constriction by any mere machine. The hand would not be wearied in so short a time, but if it should become so, it could easily be replaced by the other, with scarcely perceptible interval of grasp.

After thorough cleansing of the cavity, the uterine wound was closed by fine silver wire sutures, passed at very short intervals from the internal surface of the uterus outward through the whole thickness of the wall, and returning similarly through the opposite side, so that the middle of the loop, instead of the twist, was upon the peritoneal edge of the wound, thus bringing the peritoneal surfaces closely together with a little inversion of the edge. The wires were cut pretty closely and the ends turned in between the edges of the incision towards the peritoneal surface. This method was continued until the lower end of the wound was so nearly reached that it was no longer practicable, when silk braid carbolized and waxed was substituted.

The condition of the mother previously and at the time of the operation gave but little hope, if any, of her life, but though the case was fatal after thirty-six hours, the autopsy showed complete union of the uterine wound throughout, and the abdominal cavity free from any trace of blood. The uterine surface was free from inflammatory action, but the intestines in the upper part of the abdomen above the uterus, were largely agglutinated by lymph. The child lived thirty-two hours, and was found to have had a large clot beneath the membranes of the brain, with fracture of the right parietal bone from the compression at the pelvic brim early in the labor.

The advantages of this mode of constriction and the facility with which it can be performed, recommend the plan of Dr. Broomall as a very important advance in the improved Cæsarean operation. The objection urged by Carl Braun von Fernwald to the use of the ligature on the ground of the head being sometimes impacted in the brim (a condition certainly extremely rare in a pelvis of two and one-half inches) would not be applicable to the manual constriction, as the hand with its palmar surface could efficiently compress the cervical tissues against the head itself, quietly raising it upward till it had cleared the brim, the cervix being stretched and thus easily and efficiently grasped.

MYOSITIS OSSIFICANS.

AT the Twelfth Congress of the German Surgical Association, KÜMMELL reports a very interesting case of this rare disease, already noticed by Partsch, Uhde, and Langenbeck (of Wiesbaden), and others. The ossification probably began in intra-uterine life, since it was noticed as early as fourteen days after birth, in the spinal deformity and the hampered movement of the arms. At two years of age, numerous fluctuating tumors were noticed on the back, which gradually hardened, and finally became as hard as bone. In some cases, this process went on so rapidly that a soft lump on the boy's head at twelve years of age in two days had already apparently ossified.

Although it was so widespread, but little pain attended the disease, so much so that the boy's school-life began at seven, and had not been interrupted. It began in the soft parts, and gradually extended to the neighboring bones. The facial muscles were apparently free, and fortunately also the muscles of deglutition, though the floor of the mouth was changed into a fibrous mass, which had involved the hyoid bone and the thyroid cartilage. The respiration was abdominal, the thorax deformed, and the pectoral muscles atrophied and ossified, so that the arms could not be abducted. Three weeks later, when one of the sudden onsets of the ossifying process had occurred (and this spasmodic mode of attack is peculiar to the disorder), the heretofore intact biceps suddenly ossified, and the elbow was fixed in right-angled flexion. The back had suffered more than any other part of the body. The lower extremities were but slightly affected, but had begun to suffer of late more than before.

In Partsch's case, the urine was found deficient in the lime-salts, which were reduced to one-tenth of the normal amount, but in Kümmell's no such change had occurred. The faradaic irritability was decidedly lessened.

The etiology of the disease is confessedly very obscure, partly owing to its rarity, partly to the want of post-mortem and microscopic observations, and partly to the absence of thorough clinical investigation. No effort, for instance, seems to have been made to study the state of the blood in any reported cases. It seems not to take its rise from traumatisms, nor from any other assignable cause, but probably to be an enormous exaggeration of a process which slowly proceeds as we grow older. The well-known fact of the loss of suppleness of the muscular system in consequence of the gradual invasion of the muscular bellies by the tendons as youth passes into age, and the ossification of the connective and fibrous tissues at their attachments to bone, may be cited as illustrations. So marked is the former that acrobats must have begun their muscular training in early youth, and have been constantly trained from childhood if it be desired that they shall achieve success.

It is to be hoped that every case will be investigated with most minute care, and reported at length.

CONTUSIONS OF THE BRAIN AND SPINAL CORD.

With an article under this caption in the American Journal of the Medical Sciences for July, 1883, unfortunately comes to an end a series of valuable contributions to the surgery of the central nervous system, by the lamented John A. Lidell. It is a subject which will well repay study by all those who are liable to meet such accidents.

It is largely a plea for the theory of physical lesion of the brain by *contre-coup*. The bent of modern surgical belief is opposed unquestionably to the existence of such lesions in bone, but it seems to be at least possible in the soft parts, although Dr. Lidell does not enter into the physics of the question, but limits his attention to the clinical side of the case. The cases adduced by Dr. Lidell are valuable as illustrating this form of injury.

Moreover, the paper emphasizes the importance of prolonged care and caution after any injury to the skull sufficiently severe to produce nose-bleed, headache, mental disturbances, or other grave cerebral symptoms, though only temporary in duration.

The occurrence of abscess of the brain from mere contusion is also certainly shown to be possible; and, as denoting the more fearless treatment now often successfully pursued, he advocates trephining and incision of the meninges to evacuate the matter otherwise pent up, and sure to do mischief if let alone. It is a heroic remedy, it is true, but it has been so much more successful than that of a fatal expectancy that it should be much more frequently resorted to in the future.

RATIONAL EDUCATION AS TO TEMPERANCE.

The evils of intemperance are seen by physicians more frequently, perhaps, than by any other class of men, if we except the officials in our courts and prisons. Rum is the most fertile source of physical disease and deterioration, to say nothing of its results—wastefulness, crimes, and moral destruction. Syphilis itself in most cases is born of drunkenness.

To combat this gigantic evil, the Woman's Temperance Union has begun at the beginning. They aim not at legal suppression, or license, but at the education of the young in the principles of physiology and hygiene as applied to alcohol, opium, and their congeners. To do this they propose to obtain the enactment of laws in all the States similar to those now in force in Vermont and Michigan, viz., that there shall be in the public schools as one of the regular studies, elementary scientific instruction in "physiology and hygiene, which shall give special prominence to the effects of stimulants and narcotics upon the human system." Public sentiment shall thus be created by public knowledge of the character, extent, and influence of the evil. It is in the school-house that the dram-shop shall find its strongest foe. Give it twenty years, and it will win.

These women mean business, and they go about it in a most business-like way. Their plans for work are as elaborate as those of any strong political party. No prentice hand has sketched them out. They use no invective, no polemics, no sarcasm, no oratory, but hard scientific facts, and well-founded statistics.

And if systematic work will win, they will not lack for it. They have six departments: preventive, educational, evangelistic, social, legal, and one on organization, with numerous subdivisions, such as, on heredity, hygiene, scientific instruction, literature, the press, medical associations, statistics, prisons and police, railroad employés, the army and navy, women, fairs, capital and labor, legislation, the franchise, and work among various nationalities.

Last year, at St. Paul, through their inspiration the American Medical Association passed strong resolutions deprecating "the alarming prevalence and ill-effects of intemperance," bespeaking "conscientious caution" on the part of the profession in prescribing such potent drugs and welcoming "any change in public sentiment that would confine the use of liquors to the uses of science, art, and medicine."

As a public journal, striving for the health of the community, we can strongly commend this action and place ourselves heartily in accord with the calm scientific spirit which seeks to suppress intemperance and vice.

REVIEWS.

Manuel des Injections Sous-cutanées. Par Bourneville, Médecin de Bicétre, et Bricon, Docteur en Médecine. 16mo. pp. xxxvi. 175. Paris: A. Delahaye et E. Lecrosnier, 1883.

Manual of Subcutaneous Injections. By Drs. Bourneville and Bricon. Paris, 1883.

The subject of hypodermatic medication cannot be fully discussed in one hundred and seventy-five sextodecimo pages. There is, however, much more in this book than might be supposed from its size. It opens with a history of hypodermatic medication, descriptive of the various syringes in use (on the Continent, more especially), a table showing the solubility of a number of substances in one hundred parts of water, and a short discussion of the local accidents sometimes occurring in the use of the syringe.

In treating of the substances used hypodermatically, the following excellent plan is systematically observed: First, the name of the drug, and its solubility in the various solvents; second, its physiological effects; and, third, its local effects, under which are given in many places formulæ for the solution and preservation; and, lastly, the therapeutic use is given.

An unusually large number of drugs are treated of as adapted to hypodermatic use. Prominent among these we notice, aloin, cantharides, cedrin, iron, in the form of the dialyzed, pyro-phosphate, citrate, lactate, and peptonate, guachamaca (see The Medical News, April 7, 1883, p. 385), picrotoxine, bromide and iodide of potassium, resorcin, and tayuya.

The book, unfortunately, contains no index; this defect, however, is in some measure compensated for by the fact that the drugs are arranged alphabetically.

SOCIETY PROCEEDINGS.

PHILADELPHIA ACADEMY OF SURGERY.

Stated Meeting, May 7, 1883.

The President, S. D. Gross, M.D., LL.D., D.C.L., in the Chair.

Dr. Samuel Ashhurst reported the following:

UNUSUAL FRACTURE OF THE PATELLA.

On the 16th of August, 1882, I was called to see a little girl about four years old, who had struck her knee with a large glass marble. Upon examination I found an oblique fracture of the left patella, vertical in direction, and apparently extending from within outwards obliquely through to the joint surface of the bone.

The edge of the fragment presented sharp and clearly immediately underneath the skin, so that despite the unusual character of the injury, I was able to convince myself of the accuracy of the description given above. Slight pressure restored the fragment to its proper position, and it was easily kept in place by strips of adhesive plaster. The tenderness in the joint was such that a pasteboard splint was applied to the under surface of the extremity.

As the accident occurred at a watering place and the patient returned home in a few days, I am unable to give its after-history from my own observation, but I learn from Prof. J. H. Brinton that the patient came under his care with a severe attack of synovitis.

Upon looking over the various standard works, I find that while oblique fractures of the patella are referred to, few cases are given. Indeed, I have only been able to find two. *Hamilton on Fractures*, in his first edition, p. 439, mentions a case where a child five years old fell, and presented the same features of injury as in the case I report, excepting that the line of fracture was near the upper and inner margin of the patella, while in mine it was near the upper and outer margin of the bone.

Malgaigne, translated by Packard, p. 626, refers to a case reported by Daniel Turner, in which a piece of the patella in a girl thirteen years old came away from an abscess, and was believed to have been broken off by striking a door.

The cause of the injury in the case I report is also unusual. Particular attention was paid to the matter, but I was unable to elicit any other history than that immediately upon striking her knee the child cried out. Upon examination of the marble of glass, and probably one and three-fourth inch in diameter, there was a slight nick perceptible upon one side, which, however, seemed totally inadequate to cause the injury, and had no appearance of having been itself caused by the force of the blow, the edges being not at all sharp.

The case was the only one of the kind I have ever seen, and seemed sufficiently unusual to be placed upon record.

Dr. Samuel Ashhurst also reported the following case of

REMOVAL OF FOREIGN BODY FROM THE FEMALE BLADDER.

In the month of October, 1882, a married lady, about thirty-five years of age, presented herself at my office and informed me that a portion of an ivory knitting-needle had slipped into her bladder three days previously. The account given of how it happened was of course apocryphal.

As she had very few symptoms, I at first thought she was mistaken, but upon introducing a long bullet-probe a bony substance was felt near the fundus of the bladder. I was able to make out the position of the knitting-needle to be nearly vertical, the lower end apparently resting upon the bas fond. After considerable trouble I succeeded in getting hold of the lower part of the needle with a pair of bullet-forceps, but found much difficulty in getting its end to engage in the urethra. When I at last succeeded in accomplishing this manoeuvre, I found that it constantly impinged against the walls of the canal, but was ultimately able to withdraw it without seriously injuring the mucous membrane. When extracted the cause of the difficulty was evident in the rough sharp edges upon the broken end of the needle which came first. There was some bleeding at the time, and slight vesical irritation for forty-eight hours afterwards, but no further trouble. The fragment of bone needle herewith shown is three and a half inches long and about three-eighths of an inch in diameter.

Dr. F. H. Gross also reported a case of

FOREIGN BODY IN FEMALE BLADDER.

About two years ago he was requested by Dr. Franklin to assist in the removal of a stone from the bladder of an out-patient at the German Hospital. The patient belonged to the working class, and was about fifty-six years of age. She said she had at one time worn a Meigs' ring pessary but had lost it (?) Dr. Franklin dilated the urethra and introduced a narrow pair of forceps, expecting to extract the stone or crush it. The hard body could be felt by the instrument, but could not be grasped. I endeavored to introduce my fingers into the vagina and give assistance in that way, but found the vagina puckered into a mass of folds and ending in a cul-de-sac. The Doctor then introduced his little finger into the urethra and soon astounded me with the announcement that there was a pessary in the bladder. I verified the statement with my own index finger. By pressing downwards the point of my finger came in contact with the inner surface of the ring pessary, which was incrusted and rough from deposits from the urine. By a lateral movement of my finger, the pessary was made to rotate completely around. We were not prepared for such a discovery, and had the patient admitted to the hospital, intending to devise some plan to remove this body from the bladder. Very early the next morning, however, the woman left the hospital, saying she had no time for an operation and must go to work. We have never heard anything of her since. The pessary, which this woman thought she had lost, had evidently produced ulceration and closure of the vagina, and afterwards by ulceration and absorption, through pressure, found its way into the bladder.

Dr. W. G. Porter related a case of

ENLARGED THYROID GLAND; TRACHEOTOMY; DEATH.

Julian N., a Russian, sixty-three years of age, applied for admission to the Presbyterian Hospital, June 13, 1881, with an enlargement of the thyroid gland, which was giving him considerable trouble, and gave the following history: His family history was good, and he had been perfectly well until three years previous to admission, at which time he had noticed a small tumor on the right side of his neck, over the thyroid gland. This had steadily increased in size, and latterly he had suffered from headache, dizziness, noises in the ears, slight difficulty in swallowing, and occasional difficulty in breathing. These symptoms had increased with the enlargement of the tumor, and, obtaining no relief in the Dispensary, he was admitted to the Hospital on the above date, under the care of my colleague, Dr. Allis. On examination, the thyroid gland was found enlarged, and presenting the usual appearance of a goitre. The enlargement occupied the median line and right side of the neck, and had evidently encroached on and displaced the trachea to the left. He now complained of great pain in his head, entire loss of appetite, great prostration, difficulty in swallowing, and constant difficulty in breathing. He was put to bed, and put on a tonic course of treatment, with a most generous diet, on which he rapidly improved, and, refusing all operative treatment, left the hospital July 7, thirty-seven days after admission, greatly relieved.

On September the 16th, he was again admitted, under my care. His condition was very much worse. He was very weak and anæmic; his pulse was rapid, feeble and intermittent; his respiration was very much accelerated, noisy, and difficult; he had great difficulty in swallowing, and his voice was reduced to a whisper. He also had a very troublesome cough, and expectorated great quantities of a muco-purulent matter, which was very fetid. Over the most prominent part of the tumor the skin had sloughed, leaving an irregular ulcer, larger than a silver dollar, the odor from which was almost unbearable. His lungs were carefully examined, but no disease in them could be detected. From the peculiar sound of the respiration, together with the constant expectoration of purulent matter, and the absence of evidence of lung disease, we were led to believe that an abnormal opening existed in the trachea, as the result of the pressure of the enlarged gland.

He stated that his present condition had rapidly developed after the introduction of a needle into the tumor by a surgeon whom he had consulted.

He was again placed on stimulants and tonics, and in a few days began to improve. His pulse became stronger and less rapid, with no intermittence. Expectoration and cough diminished, but the difficulty in breathing and swallowing remained about the same.

On September 21st, five days after his second admission to the hospital, just as I entered the ward, he was suddenly seized with a paroxysm of dyspnœa; he was terribly livid, struggling for breath, and by word and gesture implored us to do something for him. Dr. Allis was present, and we at once decided to open his trachea, in hopes of giving him at least temporary relief.

As the usual position of the incision for opening the trachea was covered by a slough, I determined to make the opening at the side. An incision was at once made along the inner border of the sterno-mastoid muscle, and after a rather deep dissection with knife and director, the trachea was reached and opened. A quantity of blood, mucus, and pus was removed by sponges, and immediately the dyspnœa was relieved. His pulse now rapidly failed, but after the hypodermic administration of whiskey and ammonia, he rallied, and soon felt very comfortable. The depth of the wound was so great that an ordinary tracheotomy-tube was of no use. I therefore cut out a portion of the trachea, and left the wound temporarily open by an ingenious contrivance of bent wire, suggested by Dr. Allis. The patient died, exhausted, three days subsequently, without any return of his suffocative symptoms.

The autopsy showed that an opening existed between the trachea and the sloughing portion of the goitre. The enlargement had mainly involved the right lobe and isthmus of the gland, and the incision which I had made into the trachea for his relief had passed directly through the left lobe of the gland, although the bleeding during the operation was as slight as I have ever seen it in trachectomy.

THE PATHOLOGICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Thursday Evening, May 24, 1883.

The President, James Tyson, M.D., in the Chair.

Dr. J. H. Musser presented specimens from a case of

SCIRRHOUS CARCINOMA OF THE RECTUM.

At the autopsy, made thirty-six hours after death by Dr. W. E. Hughes, rigor mortis was well marked, the body greatly emaciated, the skin of an yellow-earth color, and on the right buttock near the gluteal fold the ragged grayish openings of several sinuses, which, we subsequently proved, communicated with a sac behind the rectum. This sac opened into the rectum which at that point was greatly dilated. At the bottom of the dilated pouch in the posterior wall, towards the anus and two and one-half inches therefrom was a hard mass. This mass was the size of a silver dollar, involved two-thirds of the wall, but did not cause occlusion of the gut. The surface was ulcerated. The bowel towards the cæcum was dilated, the mucous membrane congested, and the muscular coat hypertrophied. The remainder of the intestine was normal, and the glands of the mesentery were only slightly enlarged. The liver weighed four and one-half pounds, was very fatty, and in the left lobe a secondary mass larger than a walnut was found. The apex of the left lung was the seat of a small area of catarrhal pneumonia; the base was bound down by rather recent adhesions. Further than this the tissues presented no other change than that due to wasting disease. Microscopical examination revealed the two nodules to be of the nature of a hard cancer.

The patient, a female, thirty-seven years old, had always been a dyspeptic, and of a constipated habit. Her mother and one sister had died of cancer of the stomach, her maternal uncle of the same disease of the liver. I attended Mrs. B., from October 11, 1881, to February 7, 1882. She died in May of the latter year. From the 5th of August previous to my first visit she had been suffering from so-called dysentery—twenty to thirty bloody and mucous stools with tormina and tenesmus. She had grown very feeble and lost much flesh. My notes state abdomen flat, tender all over, especially in the fossæ, but no tumor noticeable. Dysenteric diarrhœa continued, and I may say these discharges kept up during my attendance, at times better and again worse. The mucus was always present; the blood, at times none, again slight or again in large amounts. The appetite was poor and her dyspepsia bad. The debility and emaciation progressed and the appetite became less. In November I detected a hard tumor with apparently a raw surface, two and one-half inches from the anus. During December, she complained of pains in the legs and of severe cramps at night. In January she began to complain of pain in the right hip posteriorly. Local and internal remedies scarcely relieved it and finally the post-rectal abscess discharged. Death from exhaustion ended the career of horrible suffering. I would remark that in all probability the obstinate constipation predisposed to the location of the disease. The constant irritation of the hardened feces would tend to the deposition of the cancerous growth in this locality in a person predisposed to that disease. I have not seen constipation noted as a factor in the etiology of rectal carcinoma, but I think such a view plausible, and that we may infer the practical point—soluble bowels in the cancerous inclined.

Dr. J. H. Musser presented specimens from a case of

SARCOMA OF THE BLADDER.

I am indebted to my friend Dr. Samuel R. Skillern, for whom I made the autopsy, for the privilege of exhibiting this very interesting specimen. At the time of the examination the skin of the body was of the characteristic cachectic hue, the rigor mortis was marked, the emaciation considerable, though not striking, for on section there was a fair amount of fat in the abdominal walls and in the omentum, while the muscles were comparatively large. The abdominal cavity alone was examined. The peritoneum was healthy, the stomach and intestines of a normal appearance. Neither the mesenteric nor any other lymphatic glands were affected. The liver was slightly enlarged and fatty; the spleen normal. The genito-urinary tract was removed intact, the kidneys being severed from their attachments with difficulty on account of being surrounded by fat. Beginning with the kidneys, the left was about half the natural size with thickened adherent capsule. The pelvis was very greatly dilated, the secreting portion reduced to one-third the natural size. The medullary portion was mostly atrophied, the cortical was thin, hard, and pale. The right kidney was larger by one-third than normal, was also cirrhotic, and although its pelvis was dilated, the secreting portion was not atrophied very much. The ureters were very much dilated; averaging the size of the index finger. The bladder was in its normal position, and on opening the calibre was found lessened by one-half, the walls much hypertrophied. At the base of the bladder, in the trigone vesicale, a flat tumor was detected. It measured two inches transversely, and one antero-posteriorly. The base of the tumor was smaller than the upper surface. This surface was irregular, at some places ulcerated, at others covered with phosphatic concretions. The orifices of the ureters were found by hydrostatic means, to open into the tumor, and, hence, were somewhat occluded. The urethral canal was not encroached upon. To the left of the large tumor, were two small secondary masses. Microscopical examination of the kidneys and the tumor: in the former, interstitial and tubular nephritis was found. The tumor was of the histological appearance of a sarcoma. The sections are under the microscope for examination.

The person from whom these specimens were removed, had been a successful minister in charge of a large congregation. He had always been a great mental worker. At the time of his death, he was fifty years old. During his life, his habits were most exemplary. His previous health was good; in his family history no evidence of hereditary disease could be traced.

For the clinical history I am indebted to the various medical gentlemen that attended him.

Prof. Agnew was consulted more than two years prior to death on account of vesical irritation. Six months thereafter he passed blood by the urethra. Careful examination at this time and before, both by the urethra and rectum, failed to detect any tumor or calculus. In a short time the cachectic hue became evident, and with all, the Professor suspected malignant disease. The hemorrhages became more profuse and occurred more frequently. Prof. Tyson was then consulted. He very kindly allows me to extract the following from his notes:

Dr. Tyson said that Mr. S. first came under his observation May 27, 1880, being then forty-seven years old. He stated that he had been annoyed by frequent micturition for about five years, which gradually increased, until at that time he had to rise two or three times each night, but thought it was more frequent during the day than at night. At first he was completely relieved of this symptom during his vacation, which he spent in the woods, and was still much better at such times. He thought Poland water gave him relief, and he felt compelled to use it constantly. There was at this time a burning sensation at the neck of the bladder. The urine contained at this date one-twelfth its bulk of albumen, enough blood corpuscles to give it a "smoke hue," but no casts. On June 22 he again reported, Professor Agnew in the mean time having passed a sound, and detected a slight stricture, which he thought accounted for the symptoms. The patient was instructed to pass a sound for himself, and he thought it gave him great relief, not only diminishing greatly the desire to pass water, but also relieving the sensation at the neck of the bladder.

Dr. Tyson did not see him again until Oct. 30, 1881, when he reported that during the previous year he had been using the bougie at one time as often as five or six times a week, but more frequently every three or four days. He had been very well during this time, gaining ten pounds in his summer vacation, and at that time not urinating more frequently than any one else, although he kept up the use of Poland waters, of which he was using eight tumblers a day for five weeks while at the spring, and when at home five a day. He now mentioned that during the summer he felt an occasional soreness in the region of the bladder when stooping, and noticed also occasional chalky deposits in his urine. At the time of this visit his urine was acid, sp. gr. 1014, and contained one-fifth its bulk of albumen, but no tube-casts. No note of blood was then made.

On Nov. 7th, his urine contained a sediment equal to about $\frac{1}{10}$ to $\frac{1}{12}$ its bulk, which was composed mainly of blood corpuscles. There were a few leucocytes. He continued to visit Dr. Tyson until March 28, 1882.

During much of this time he reported himself improved, there being much less frequent micturition at times, while the uncomfortable sensations at the neck of the bladder were less. The Poland water was discontinued and ordinary drinking-water substituted, with about the same effect in relieving the symptoms. During most of this time he took oil of eucalyptus in doses of from six to ten drops three times a day, we thought at the time with good effect, but the same changes occurred when he was taking nothing. His urine was always albuminous, sometimes containing blood appreciable to the naked eye; once or twice he passed a small clot of blood from the bladder, and on Jan. 7, 1882, a large clot which he compared to a small leech. Two or three times he brought chalky concretions, evidently phosphates, which he had passed. He always thought the bougie relieved him. He was always worse after a hard day's work, as on Monday, after preaching a couple of times Sunday. Benzoic acid and ergot were used with about the same effect. The oil of eucalyptus apparently gave temporary but no permanent advantage.

On March 28th, he reported for the last time, and said that since his previous visit, seven weeks before, he had been very ill, with what seemed to be an attack of great prostration, in which the urine was little altered, except that there was increased phosphatic sediment. More recently, however, there seemed to be always, except for short intervals, more or less blood in the urine. At no time during his appearance did he present a cachectic appearance, nor any other symptoms except those mentioned of intermittent hemorrhage from the bladder and symptoms of vesical irritation, and had not suspected malignant disease of the bladder while he was under his observation, but thought rather there might be a hemorrhoidal condition of the prostatic plexus of vessels.

During the summer and fall of 1882 the general health of S., failed very much while the vesical irritation was quite pronounced. When under Prof. Agnew's care he began to use a sound, and at this time used it daily for its soothing effect. Along with the slight vesical tenesmus he suffered from a little pain at the head of the penis from the very first. During this time and in the winter the hemorrhages continued. The blood was discharged before the urine; sometimes a considerable amount of pure blood, fluid or in clots. The bloody discharges occurred with every urination, or days would pass by with clear discharges.

DR. SKILLERN attended S., from January 9, 1883, until his death in March 13th. From his notes in addition to the above I glean the following facts: The occasion of the first visit to the patient was due to a fit which he had, and the nature of which was not clear, although it was probably a syncopal attack from blood loss. He suddenly became unconscious, and when seen had a pallid face, cold, clammy extremities, a feeble pulse and shallow inspirations. There had been no convulsion, although slight convulsive movements were noticeable. Hypodermic injections of amyl nitrite soon aroused him, although he dozed for an hour afterwards; there is no evidence to prove that this seizure was uræmic. At this time his general condition was very bad. During January it is noted that he used the catheter frequently, on account of a slight difficulty in starting the flow of urine, and that in using it a grating sensation was felt by him; that the paroxysmal hemorrhages continued; that the constant feeling of discomfort at the neck of the bladder and the dysuria grew worse. Micturition occurred every two hours. In addition to the above, in February he had morning nausea and vomiting—generally losing his early meal —becoming more frequent later in the month. The loss of flesh and strength became very evident, as did the cachectic appearance. Two weeks' prior to death he began to complain of renal pain; the twenty-four hours prior the pain were agonizing. He died of exhaustion. It may be noted that the urine was never suppressed, nor was there ever marked vesical pain. Dr. Formad expressed the opinion, from an examination of the urine several weeks before death, that malignant disease of the bladder was present, confirming the opinion of the other gentlemen. His opinion was based on the character of the epithelium in the deposit, being of the appearance of the deep layers of the bladder mucous membrane.

Dr. Agnew kindly informs me, without referring to his notes, that he distinctly recalls four cases of sarcoma of the badder, all in males, and in all, bloody urine was an early and constantly recurring symptom, amounting in one of the cases to very profuse hemorrhages. Pain in one or both hips was also an early symptom. The patients were all over forty years of age.

This interesting note calls attention to the chief facts of these cases, and an especially noteworthy one—the age of the patient. As is well known, sarcoma in other situations generally occurs in early life, this in later life. Then an examination of the relation of the mouth of urethra to the flat tumor, will show how readily a sound could have passed over the tumor, while the base of the bladder being filled, the sound could not engage the mass. The enlarged prostate, was no doubt, deceptive, obscuring the vesical mass when rectal touch was made.

DR. F. P. HENRY exhibited a specimen of

INTRA-THORACIC ANEURISM MARKEDLY SACCULATED, AND INVOLVING THE ARCH AND DESCENDING PORTION OF THE AORTA AS FAR DOWNWARD AS THE LOWER BORDER OF THE SIXTH RIB.

The following notes were taken by Dr. Howard Kelly, the then resident physician, soon after the patient's admission to the Episcopal Hospital:

Dec. 7, 1882.—There is a "distinctly elevated area about two inches in diameter to the left of manubrium, occupying the first and second intercostal spaces and projecting the cartilage of the second rib. This is also the seat of greatest dulness and of strong bruit and expansile movement. Murmurs heard at apex, ensiform cartilage, and second right costal cartilage. Aortic sounds weak and muffled. Pulse in right radial and axillary, strong. In left radial and axillary weak and distinctly delayed. Brachials at elbow visible, sinuous, and atheromatous. Faint bruit in left axillary; none in right. Strong bruit in left carotid; faint in right. Same relation between subclavian arteries. Faint bruit in abdominal aorta. Left pupil always smaller than right."

Under the use of large doses of potassium iodide, there was a decided subsidence of the external tumor; also of the pulsation and bruit. The most troublesome symptom, dyspnœa, was not however materially benefited.

Death occurred on May 13th, through rupture into the right bronchus, and was immediate.

The removal of the aneurism was rendered difficult by the adhesions to neighboring tissues, especially to the sternum and ribs in front. The fifth and sixth dorsal vertebræ were deeply eroded and at the site of these erosions, the aneurismal wall was entirely gone, its place being supplied by two masses of fibrine accurately fitting into the erosions, but unconnected organically with the sac; they merely acted as plugs. The heart was in an advanced state of fatty degeneration and slightly enlarged. The aortic valves were perfectly healthy, but immediately above them were marked atheromatous changes. The opening into the right bronchus was about the size of a three-cent piece.

NEWS ITEMS.

The Cholera Epidemic in Egypt.—The mortality from cholera continues to be large, and the epidemic shows no signs of abatement. The reported mortality for the week ending July 30th, in the principal towns was as follows:

Cairo (7 days), . .	2495	Damietta (2 days), .	16
Gizeh (5 days), . .	281	Menzaleh (1 day), .	3
Chibin (2 days), . .	347	Ismailia (2 days), .	9
Tanta (5 days), . .	148	Zagazig (2 days), .	23
Ziffe (4 days), . . .	73	Alexandria (3 days),	14
Samanhud (1 day), .	7	Mehalla (4 days), .	181
Mahalet (2 days), .	99	Rosetta (2 days), .	18
Mansura (3 days), .	37		

At Cairo the disease is markedly abating. On July 24th the mortality was 558, and on the 30th it had decreased to 275. The mortality on the intermediate days was respectively 422, 311, 277, 322, and 330. At Chibin it decreased from 113 on the 24th to 81 on the 28th; and at Ghizeh from 95 on the 24th to 51 on the 28th.

Most of the large towns in lower Egypt have been attacked, as will be seen by reference to our map.

Lord Hartington, Secretary of War, stated, on July 26th, in the House of Commons that there had been fourteen cases of cholera among the British troops in Egypt, eleven of which proved fatal.

Under date of July 31st, the commander of the British forces at Cairo telegraphs that the general health of the troops is good. He says that the cholera is less virulent in Cairo, and that the cases under treatment are more hopeful.

Forty members of the army hospital corps have been ordered to Egypt.

The government is considering a project for the partial burning of other dangerous quarters of Cairo like Bulak.

An analysis has been made of the water of the Nile, which shows that it is infected with putrid matter to a point above the cataracts.

The Cholera Symptoms.—Dr. Mackie, Consular Physician at Alexandria, forwarded, on July 19th, by telegraph to the *British Medical Journal* (July 21, 1883) the following interesting details concerning the cholera cases:

At Mansura, the early symptoms of cholera are generally simple diarrhœa, some vomiting, with coldness and blueness of the hands, and cramps, variable in character; the abdominal walls are relaxed, and there is suppression of urine. In some severe cases, the temperature was found to be as low as 96.5° Fahr. during the collapse, rising to 102° an hour after death. The shortest illness proves generally fatal in from nine to twelve hours.

The Medical Commission despatched to Damietta report that the symptoms there manifest themselves in coldness and blueness of the extremities, the skin being cold and wrinkled, the facies choleraica well marked. Aphonia is also present, with pulselessness, vomiting, and diarrhœa, with white, watery dejections, sometimes accompanied with mucus. Cramps occur, and the eyes soon become sunken. the pupils dilated, and a blue circle appears around the orbits; the tongue feels cold; there is suppression of urine, and frequent spasmodic contraction of the fingers; sometimes retraction of the belly, and sometimes meteorism. The temperature is lowered. Symptoms often commence suddenly, with headache and fainting; and premonitory diarrhœa is only occasionally noted. The necropsy showed the large intestine to be empty and contracted, feeling like a cord; the small intestines were congested, and filled with whitish liquid, slightly colored by extravasated blood, but no change was found in the glands. The follicles of the stomach were distended with a watery fluid. The bladder was empty; the liver and spleen slightly congested; the kidneys normal; the lungs congested, and the cavities of the heart filled with dark blood. The gall-bladder was distended, the brain congested. The ventricles of the brain contained a quantity of serum, and there was an arborescent appearance of the meninges.

Cholera in Asia Minor.—Two cases of cholera are reported at the Lazaretto at Smyrna, one of which has proved fatal.

Cholera in Russia.—The correspondent of *The London Times* at St. Petersburg says: One or two cases of cholera have been reported in Russia in the last few days. A Charkoff paper reports several cases of what it calls cholerine. Great efforts are being made to purify St. Petersburg. The clergy have held a special service of intercession for the preservation of Russia from the disease.

The report that cholera has appeared at Rostok is officially denied.

Cholera in England. — Sir Charles Dilke, President of the Local Government Board, said in the House of Commons on July 27th, that in the last fortnight there had been three suspicious cases of sickness in England which were declared to be cholera, but it had been ascertained that they were what is known as simple cholera. There is no Asiatic cholera, he said, in England or in Europe. The deaths from simple cholera in England this year, he stated, had not reached the ordinary average; last week the number was only half of the usual average.

Mr. Cross, Under-Secretary for India, stated that 1161 deaths from cholera occurred in the Bombay Presidency during the first week of June.

Lord Carlingford, President of the Council, stated in the House of Lords on the same day that the Government had no intention to enforce quarantine against shipping arriving at English ports, as it was thought impossible to establish an absolute quarantine system. He said medical inspection would be adopted instead.

Isolated cases of supposed cholera have been reported in Wales and in the London docks. The authorities say they know nothing of any death from cholera in the London docks. The officers of the Local Government Board do not believe that isolated cases imply an outbreak of Asiatic cholera. Several deaths occur in London weekly at this season of the year which are classified as cholera, but which are difficult to distinguish from aggravated diarrhœa. There have been several hundred cases of the latter disease weekly this summer, which is in excess of the average.

The Liverpool Town Council having called the attention of the Privy Council to the danger to public health arising from large cargoes of rags received there from Egypt, the Privy Council sent a reply, in which they declined to interfere in the matter. The particular cargo cited in the Town Council's communication as a cargo of Egyptian rags was not intended to be landed at Liverpool, but to be conveyed to New York or Boston. The Town Council decided to apply for power to deal with rag cargoes.

Precautions have been taken at Glasgow to prevent the introduction of cholera.

Cholera at Rio.—The National Board of Health has been informed that during the week ending July 26, there were twenty-four deaths from cholera at Rio de Janeiro.

Action of the French Government.—The Chamber of Deputies has promptly granted a credit of 50,000 francs asked for by the Government, to pay the expenses of the Pasteur Commission, which is to be sent to Egypt to investigate the cholera epidemic.

The following proposition has been submitted to the Municipal Council of Paris: "That the Préfect of the Seine make the necessary provisions for constructing crematory furnaces in each of the three large cemeteries of Paris, to be utilized in case of an epidemic of cholera."

Precautions Against Cholera in America.—The inspection at British ports ordered by the American Consulate so far has shown no case of cholera or contagious disease on vessels sailing from Great Britain for the United States.

The following telegram has been sent to the Collector of Customs at Boston by the Secretary of the Treasury:

Because of the expiration by limitation of the Act of June 2, 1879 (Chap. 11, 21 Stat.), I conceive that Chapter 66, Act of April 29, 1878, is again in force and the regulations by circular dated March 3, 1879, (Dept. No. 34), are again promulgated. A telegram from Liverpool informs me that the steamer Bavarian sailed on Wednesday for Boston, having one hundred and fifty-five bales of Egyptian rags in her cargo. You will enforce the law and regulations against her from the mildest to the severest, as occasion shall demand, reporting from time to time by telegram or letter as you shall find it necessary to proceed from one degree to another of severity.

The Act of June 2, 1879, was intended as a protective measure against the plague, then prevalent in Russia, and the regulations ordered to be promulgated, read as follows:

Until further orders, no vessel from any port of the Black Sea or the Sea of Azof, conveying any rags, furs, skins, hair, feathers, boxed or baled clothing, or bedding, or any similar articles liable to convey infection, nor any vessel from any port of the Mediterranean or Red Seas, having on board such articles coming from Southern Russia, shall enter any port of the United States until such articles shall have been removed from the vessel to open lighters or to some isolated locality and the vessel disinfected and thoroughly ventilated; and the suspected articles shall be disinfected either by chemical agents and exposure to free currents of air or by burning, as shall be determined in each case by the Surgeon-General of the Marine-Hospital Service.

The certificate of the State or Municipal Quarantine Officer of Health may be accepted as satisfactory evidence of compliance with these regulations on the part of the vessel.

The Board of Health of Boston is taking every precaution against the landing there of infected rags and paper stock from the cholera districts. The steamer City of Boston arrived July 27th from Liverpool. On being boarded by the Custom House officers there were found one hundred and fifteen bales of rags, which are now being transferred to quarantine. The steamer Missouri, of the Warren line, arrived the following morning from Liverpool, and it was found that she had over one hundred and fifty bales on board. They were shipped to quarantine. The leading importers of rags in Boston have agreed not to import rags from places in which they might be likely to become infected.

Surgeon-General Hamilton, of the Marine Service, has written to W. H. Pearsall, of Hartford, in regard to a complaint of the rags on a vessel lying at Belle Dock, New Haven, in which he says that, as the vessel has entered the port, it is under the jurisdiction of the Local Health Officer. Dr. Hamilton says that in 1879, when the plague was prevailing in Asia Minor, measures were taken by the Treasury Department to prohibit the introduction of rags until after their fumigation and disinfection. It was then claimed by the paper manufacturers that the rags when carried to the mill were thrown into vats of chloride of lime and there disinfected simultaneously with their unbaling. As it is impossible to fumigate rags while in bale, nothing more was done with them than to give them plenty of air at the time of their removal to lighters. Dr. Hamilton concludes: "If the statement of the paper manufacturers is correct there would appear to be little danger if immediately removed to the mill."

The following notice has been sent to the consignees of vessels and importers by Dr. Smith, Health Officer of the Port of New York:

In view of the fact that cholera is prevailing as an epidemic in Egypt, and at points in the direct line of commercial intercourse with the port of New York, and that rags, one of the most common of the carriers of the germs of infectious and contagious diseases, are brought in considerable quantity to this port from Alexandria, Cairo, and ports on the Mediterranean east of these ports, notice is hereby given that before such cargo is allowed to pass the New York Quarantine, satisfactory evidence must be given that they have been washed and rebaled at ports this side of the infected localities, and where there is no suspicion that the disease prevails. It is believed that this article of commerce is frequently shipped from the ports referred to to European ports, where competition in freights is so considerable as to make it profitable to reship to this port. Consignees or owners of such cargo will be required to furnish satisfactory evidence that rags reshipped from such ports have been cleansed, disinfected, and rebaled at the port of transshipment.

Cholera Precautions taken by the Governments of Europe.

England.—Steamers coming from India via Suez, will not be regarded as suspicious if they have not stopped at suspected ports; the same will hold regarding vessels from Alexandria, in view of the length of the voyage, if no case has appeared on board. The medical officer of health will, as soon as possible after a suspected ship has been certified to be infected with cholera, examine all persons on board of the same; and all persons who shall not be certified by him, shall be permitted to land immediately on their giving their names and the places of their destination.

France.—The Minister of Commerce has ordered vigorous measures to be taken against the introduction of cholera into French ports. Vessels coming into French ports from Malta, Cyprus, the Suez Canal, and other places near the infected district, will be considered as dangerous. If only suspected, they will be quarantined for seven days. If infected they will be quarantined for ten days, and a thorough system of disinfection carried out. The local authorities are vested with power to carry out these and whatever other measures they may think necessary.

Spain.—The Board of Health of Gibraltar has prescribed a quarantine of twenty-one days for vessels coming from the Suez Canal since June 28. One million pesetas (about $200,000) have been appropriated for the necessary precautions against cholera.

Germany.—Vessels coming from Turkey, Asia Minor, Syria, the northern coast of Africa east of Algiers, the Red Sea, and the western coast of Africa as far north as the Straits of Gibraltar arriving in German ports, will be submitted to special surveillance, if they have come from a port where the existence of the plague, cholera, or non-sporadic yellow fever is suspected, or which, during their voyage, have had any communication with the above-named ports. Suspected vessels will be quarantined for six days.

Italy.—The Minister of the Interior has prescribed the following quarantine rules: Ten days for a ship which has made a voyage of more than ten days without any cholera occurring on board; fifteen days for ships having made a shorter journey under the same conditions; twenty days for a ship of which there is any suspicion of the presence of cholera. These measures are applicable to ships coming from Egypt, Tripoli, Malta, Cyprus, and ports situated on the Suez Canal. Importation of rags and old clothes from any of the above places is prohibited. Ships coming from the Austrio-Illyrian and Dalmatian ports are quarantined for five days.

Belgium.—Five days' quarantine for ships coming from India.

Denmark.—All ships coming from Egypt will be quarantined.

Russia.—The same precautions against the importation of cholera have been taken, as in other European countries. Russian subjects of the Mahomedan religion will not be allowed to go on a pilgrimage to Mecca.

Bulgaria.—Turkish merchandise will be quarantined. A sanitary cordon has been placed on the frontiers of Eastern Roumelia and Macedonia.

The History of the Cholera Epidemic.—Dr. J. Mackie, the Consular Physician at Alexandria, has forwarded to the British Government a report concerning the rise and progress of the epidemic, which appears in the *British Medical Journal*, July 21, 1883, and from which we abstract the following. He says:

I regret that, up to the present, I have been unable to obtain precise information with regard to the outbreak of cholera at Damietta, as no attempt at inquiry has as yet been made to endeavor to arrive at a knowledge of its origin or cause. The existence of "suspected cholera" at Damietta was first made known in Alexandria on Saturday, June 23d, with eleven cases for that day; and I believe the first intelligence was conveyed by telegram from private individuals at Damietta.

The suddenness of the outbreak seems to have paralyzed the Egyptian authorities. Their first act was to establish a *cordon sanitaire* to prevent all egress, leaving the unfortunate population of Damietta to die without help, or succor, or chance of escape. For days after the disease broke out, telegrams were received daily, complaining of the total want of doctors, medicines, and disinfectants, etc. In a town of which the population is stated at 35,000, there seems to have been no organized medical or hospital service, no help of any sort for rich or poor—they were shut in by a cordon and left at the mercy of the disease, to die in numbers and propagate cholera. It never occurred to the authorities to endeavor, by an energetic measure, to save the people and stamp out the disease by driving the inhabitants from the infected part of the town, and camping them out in some healthy place, supplied with good food and water; this they are now doing to some extent.

Until a proper inquiry is made into the origin of the outbreak, whether local or imported, any opinion on this point at present must be more or less speculative.

It is a matter of experience that outbreaks of zymotic diseases generally are favored by conditions which certainly have existed in Egypt for some time. Whether these conditions or causes contained the necessary germ or material for the production of cholera, research may or may not with certainty establish.

For some time past, cattle-disease (bovine typhus) has been raging epidemically in the delta of the Nile. It has been matter of current report, and I may say general belief for some time, that many diseased cattle were slaughtered by the fellaheen, and sold in the bazaars of the villages for food. To save the expense and trouble of burying those that died, it was, and is, a common practice to remove the skins, and pitch the carcasses into the Nile or the nearest canal. The Damietta branch of the Nile, especially in its lower part, from Samanhud and Mansura, seems to have been particularly favored in this respect, for the local European press had been receiving for some time information from correspondents at those places that carcasses of animals were constantly floating down the Nile, exhaling a most offensive odor.

The inhabitants, in addition to breathing this poisoned atmosphere, take their water-supply direct from the Nile, which, in addition, is about at its lowest at this season. It is also subject of report and belief here that the natives have been known to drag the carcasses from the river and use them as food. I make this statement with reserve, for although I have heard it repeatedly stated, I am loath to believe it. The heat at the outbreak of the disease, and for some time previously, had been excessive and oppressive, with damp atmosphere.

The uncleanliness of the town of Damietta, like every Egyptian town, is reported to be abominable, and the inhabitants particularly uncleanly in their persons, their food, and their habits.

At the time of the outbreak of the disease, a large fair, at which it is estimated that 10,000 people were collected, was being held at Damietta. The medical commission, before establishing the *cordon sanitaire*, ordered the people collected at the fair to be dispersed. Such are some of the local causes which would be supposed to favor the development of zymotic disease.

Those who hold that the disease can only have originated by importation, pretend that it has been imported from Bombay, and a report has gained a little credence that two Bombay merchants just arrived in Egypt were at Damietta Fair, and that they brought the germs of the disease either by their person or merchandise. I have not been able to trace these two Bombay merchants, or find out if they showed any symptoms of cholera.

Those that hold that the disease has been imported, give as a reason for this opinion, that cholera has never originated spontaneously in Egypt, and that a short time before the outbreak in Egypt cholera had assumed a more severe form in Bombay. The precise manner or means by which it has been imported, has not been stated, except the report, believed by some, of the two Bombay merchants, and others of a similar character; such as, for instance, a fireman ran away from an Indian steamer at Port Said, and made straight for Damietta. Those who believe in importation by these means, forget or are ignorant of the fact that at the time that the two merchants of Bombay must have arrived in Egypt, there was a long quarantine at Egyptian ports in the Red Sea against India, which these gentlemen must have undergone before setting foot in Egypt. There remains for them their own argument, that cholera-germs may have been conveyed by their merchandise, that they may have been lying dormant in the merchandise for an indefinite period, and escaped destruction by the quarantine disinfection.

This, were it likely to be possible, would prove more than anything else the uselessness of quarantine. They forget also, or do not mention, that when our Indian contingent arrived in Egypt last summer cholera was prevailing in Bombay, and no case happened among the troops or camp-followers, nor was imported by the mass of clothes, merchandise, and material of all sorts, which such an equipment must have brought with it. It is further brought forward as argument, that as the precise nature of cholera-germ, or infection, is not known, that some peculiar conditions may be necessary for its development, and that this year, though not last, the necessary conditions existed, and the imported germ gave rise to cholera. Here we come to a combination of an imported and local origin; but, without proofs, which we at present do not possess, I cannot believe that, with a rigorous quarantine, even if a quarantine were necessary against India, it can have been imported to Damietta.

The reason seems very strong in favor of a local origin. When I compare what information we have of this outbreak, with my recollections of the severe epidemics of Asiatic cholera which visited Egypt in 1865, I am inclined to believe that it has had its origin in local causes, and will not spread to any alarming extent. The ten thousand people who were dispersed from Damietta Fair do not seem to have had cholera amongst them, or to have carried cholera with them throughout the length and breadth of Egypt, as they certainly would have done in 1865. At the time of their dispersion the deaths from cholera were already about forty daily, and the type of the disease virulent, recoveries rare, and death occurring in very many cases after from four to ten hours' illness. The disease has now been prevailing for sixteen days, according to our information, and, with the exception of a few cases in Port Said and Tanta, and two of suspected cholera in Alexandria, has been limited to the small district from Damietta to Samanhud.

Another reason for believing that some local cause was at work, is that, at the outbreak of the disease, the daily mortality from general diseases also increased very much. The ordinary mortality of Damietta from general diseases, which is four daily according to sanitary returns, amounted up to fourteen or fifteen daily, as the deaths from cholera reached their daily maximum, and had been increasing for days before cholera was announced as suspected; and now the daily mortality from cholera and general diseases have both considerably diminished, the latter being reduced to about the ordinary rate.

The sanitary arrangements of the country are as bad as they were in 1865; it is but little changed in that respect. In some of the larger towns, Alexandria, Cairo, etc., magnificent blocks of buildings have been erected, streets paved, etc.; but unfortunately, all has been done with the most perfect disregard of the first principles of sanitary science; and Alexandria at present, with its vile system of sewers, house-drains, and house sanitary arrangements, seems constructed expressly to propagate and engender zymotic diseases. Many of the sewers have not been cleaned since they were constructed, and they are so constructed that it is next to impossible to clean them. None of the closets, drains, or sewers are either trapped or ventilated, and the town is full of stinking cesspools. The Europeans and Levantines, especially Syrian house proprietors, surpass the natives even, in the construction of unhealthy houses. An energetic effort to cleanse the town is being made by a combined Consular, Medical, and Mercantile Extraordinary Sanitary Commission, composed of forty-four members, Europeans and natives, under the presidency of the Governor of Alexandria.

This will do some good work in cleansing bazaars, public places, and the exterior of the town; but the house-closets untrapped, communicating with filthy sewers, unventilated, leaking soil-pipes, or rather holes down the centres of walls serving for soil-pipes and allowing extensive leakage, open latrines for servants in the very centre of the kitchens, will still remain to convey infection from family to family, from house to house; and if cholera visits us, it is bound to spread, in spite of all that the Extraordinary Sanitary Commission can do.

The Egyptian Government is, as usual, receiving its share of praise and blame for measures taken or neglected, to stop this epidemic. Many Europeans, medical men and others, who blame them for not stopping the epidemic, praise loudly the institution of the *cordon sanitaire*. Give them a *cordon sanitaire* or quarantine, and they are given a feeling of safety. I believe that the *cordon sanitaire* was the worst means that could have been adopted, I mean as they imposed it. The *cordon* gave a feeling of safety to outsiders, and the inhabitants within were left to die neglected to propagate cholera, while the authorities had a day or two to reflect and make their preparations for the next step. Had they evacuated at once the infected part of the town, and placed a *cordon* to prevent the return of the inhabitants to it, as well as their communication with other villages, I think it might have been stamped out.

YELLOW FEVER AT BALTIMORE.—The British steamship California, from Vera Cruz, arrived off Quarantine at Baltimore on July 27 with four cases of yellow fever on board, and there had been three deaths from the disease during the voyage. The vessel, officers, crew, and cargo were at once isolated at quarantine.

QUARANTINE AT THE CAPES.—A death from yellow fever occurred on the British steamship Andean, in quarantine at Craney Island, Va. Surgeon-General Hamilton, on being informed of this, ordered the sick to be transferred to the Hospital Barge Selden, at Willoughby's Cove opposite the Rip Raps, where the steamer was also ordered to anchor. All persons having had any communication with the vessel were directed to be isolated for ten days, and their clothing fumigated.

The Surgeon-General advised the removal of the infected vessel from Craney Island, because from personal inspection he has become satisfied that it is too near to Norfolk for the safety of that city (being distant about two miles), and experience shows that previous outbreaks of yellow fever at Norfolk have always proceeded from Craney Island, when that point was used for quarantine purposes.

The Secretary of the Treasury telegraphed to the Collector of Customs, at Baltimore: Instruct revenue steamer Ewing to stop foreign vessels from entering the Capes. If any sickness on board, require them to anchor near Ocean View until boarded by a health officer.

Upon the announcement of the location of the hospital barge at Willoughby's Cove, the Norfolk and Portsmouth Cotton Exchange, and the Merchants and Manufacturers' Exchange held meetings and passed resolutions petitioning the Secretary of the Treasury and the Surgeon-General to remove the hospital barge to Lynn Haven Bay, just outside of Cape Henry, and also to order into quarantine at that point all infected vessels that may enter Hampton Roads.

In view of the conflicting statements relative to the best location for the hospital barge Selden, the Secretary of the Treasury invited the health authorities at Newport News, Baltimore, Norfolk, and Richmond to meet Surgeon-General Hamilton, of the Marine-Hospital Service, at Fortress Monroe, to confer with him on the subject.

The Sanitary Commission met at Old Point on July 28, and established the national quarantine for all approaches on Chesapeake Bay and tributaries at Fisherman's Island, on the eastern shore of Virginia, near Cape Charles. The relief barge Selden was at once towed to that point, and all arrangements made for any emergencies which may arise. The English steamship Calfornia, from Vera Cruz, for Baltimore, was ordered at once to the newly established quarantine.

The Board recommends that the barge Selden be relieved as early as practicable by one of the vessels in ordinary now at the Navy Yard, as the barge is not practically seaworthy, and had she been established at Lynn Haven Bay, would have been lost the first gale with probably all on board.

Surgeon-General Hamilton has ordered Surgeon Henry Smith to take charge of the National Quarantine at the Capes.

New Orleans in a Healthy Condition.—President Jones, of the New Orleans Board of Health, telegraphed to Surgeon-General Hamilton, on July 26th, that up to date there has not been even a suspicious case of fever in New Orleans this year, and that the city is in a healthy condition.

Two men, on July 29, escaped in a boat from a vessel undergoing quarantine at the Ship Island Quarantine Station, and made their way to Pass Christian. When the fact became known to President Jones, of the Louisiana Board of Health, he ordered the arrest of the men. They were taken into custody, and turned over to the United States authorities, charged with stealing the boat.

A Case of Yellow Fever at Philadelphia.—A seaman on the brig Julia Blake died of yellow fever on July 25th, at the Lazaretto Station, to which place he had been removed from the vessel. The brig, which was bound from Havana for Philadelphia, loaded with bones in bags, is detained at quarantine, and will be thoroughly fumigated and the cargo removed before being permitted to pass up the river. She will probably be detained at the station for three weeks.

Yellow Fever at Havana.—There were forty-eight deaths from yellow fever in Havana last week. Surgeon-General Hamilton, on July 30th, received a cable dispatch from Havana stating that the City of Merida, from Vera Cruz to New York, left eleven cases of yellow fever at that port. The steamer was disinfected on Saturday.

Quarantine Power of the Government.—The Secretary of the Treasury has been somewhat puzzled as to what to do in view of the approach of infectious diseases by sea. By chapter 66 of the Laws of 1878, the entry of vessels from infected ports was forbidden or restrained, and the Surgeon-General of the Marine-Hospital Service was empowered, under the direction of the Secretary, to make regulations therefor. At that time, the Russian plague was imminent. Regulations were made which directed quarantine isolation of infectious freight, disinfection, ventilation, and even burning thereof if necessary. By an Act in 1879, chapter 11, the National Board of Health was substituted for the Surgeon-General of the Marine-Hospital Service, and the Act of 1878, so far as it gave power to that officer, was repealed. But the Act of 1879, by its own terms, was limited in existence to four years, which term expired in June of this year.

The query in the Secretary's mind was, Did the expiration of the Act of 1879 revive the Act of 1878? The general rule of common law is that the repeal of a repealing act revives the act which the repealing act repealed. The question then arose as to whether the expiration of a repealing act by its own limitation does not do the same. It was suggested by Lord Ellenborough, in the case of Warren against Windle that it does not. In 6 Wharton, page 294, Chief Justice Gibson, of Pennsylvania, criticised that decision, and declared that it does. Judge Hopkinson (Crabbe's Reports) charged a jury that it does not. Bishop, in "Written Laws," page 187, relying on the case in Crabbe, writes that it does not. Hardcastle writes that it depends upon the legislative intention, and cites the cases of Warren against Windle and Rex against Rogers.

In this confusion of the law, Secretary Folger says he has concluded that Congress could not have meant that the beneficial provisions of the Acts of 1878 and 1879, which are almost the same, except in the designation of the officers to execute them, should lapse entirely. He holds that the repeal of the Act of 1878 by the Act of 1879 was but a limited repeal, and that the expiration of the Act of 1879 by its own terms has revived the Act of 1878. He has, therefore, determined that the Surgeon-General of the Marine-Hospital Service may again issue the regulations in question, and that customs officers shall be instructed to carry them out with due discretion and caution in the use of the measure of severity.

Smallpox in New Orleans.—Smallpox appears still to linger in New Orleans. The mortality from it, for the week ending July 21, was twenty-three.

Parkman Professorship of Anatomy in the Harvard Medical School.—Dr. Thomas Dwight has been appointed to the chair of anatomy, the duties of which he has discharged during the past winter on account of the resignation of Dr. Oliver Wendell Holmes. He brings to the position a ripe experience both as a student and teacher of anatomy.

The Louisville Medical News.—We regret to note the retirement from the editorial management of our Louisville contemporary of Dr. L. S. McMurtry, whose able and scholarly contributions to its editorial columns have largely contributed to the excellent reputation which it has enjoyed.

Dr. L. P. Yandell has associated with himself Dr. H. A. Cottell in the editorial management.

The Lehigh Valley Medical Association.—The third annual meeting of this Society will be held at Easton, Pa., on Wednesday, August 15th, under the Presidency of Dr. Traill Green.

An Ethical Symposium.—Messrs. G. P. Putnam's Sons announce a series of papers, from the New-code stand-point, upon Medical Ethics and Etiquette, by Drs. Alfred C. Post, S. Oakley Vanderpoel, William S. Ely, Lewis S. Pilcher, Thomas Hun, William C. Wey, D. B. St. John Roosa, Abraham Jacobi, and Cornelius R. Agnew.

Dr. D. W. Yandell was a member of the Committee of Citizens which escorted the President from Washington to Louisville to attend the opening of the Exposition.

The British Medical Association.—The annual meeting of this Association was held at Liverpool this week, beginning on Tuesday, under the Presidency of Dr. Waters, of Liverpool.

Dr. Austin Flint will read a paper, in the Section of Medicine, on "Early Tapping in Cases of Ascites."

New Brunswick Medical Society.—The third annual meeting of the New Brunswick Medical Society was held in St. John, on Tuesday, July 19th. The following officers were elected for the ensuing year: *President*, E. A. Vail, M.D.; *First Vice-President*, Thomas Walker, M.D.; *Second Vice-President*, E. M. Patterson, M.D.; *Secretary*, G. M. Duncan, M.D.; *Corresponding Secretary*, W. F. Coleman, M.D.; *Treasurer*, Frank A. Nevers, M.D. The next meeting will be held in St. John, on the third Tuesday in July.

Prof. Virchow's Resignation.—Prof. Rudolph Virchow has resigned from the Association of German Physicians. This step was taken an account of the Association having publicly censured him for writing a note of thanks to an apothecary, Brandt, who sent him a box of pilulæ helveticæ (the formula of which is published) during a recent sickness. This note stated that the pills had been beneficial to Prof. Virchow, and Brandt, without his knowledge, published it as a testimonial. Prof. Virchow thinks that the censure was unmerited, and he denies that he gave a testimonial at any time for these or any other pills.

Health of the Queen.—Many exaggerated accounts have been circulated as to the health of Queen Victoria. The *Lancet* states that there is nothing in Her Majesty's condition to justify the slightest alarm or anxiety.

A Corner in Opium.—There is quite a stiff speculative movement in opium in the New York market, on the assumption that the cholera in the East must seriously interfere with the gathering of the crop. There was every prospect that the crop itself would be an abundant one, but the reasoning now is that the pestilence will not leave hands enough to gather it in or to make the necessary preparation for the succeeding crop. As a result of this talk, prices, within the few days past, have been forced up to $3.75 @ $4.00, duty paid, or about fifty cents a pound advance. As yet, however, the speculators have not succeeded in impressing buyers with their views to any considerable extent, and should the pestilence speedily subside they may find themselves in as dubious a position as other speculators who tried to corner the market in former years, on a short crop theory, and that proved to be based upon a miscalculation.

Health in Michigan.—Reports to the State Board of Health, for the week ending July 21, 1883, indicate that cholera infantum, intermittent fever, cerebro-spinal meningitis, and cholera morbus have increased, and that consumption, rheumatism, typho-malarial fever, and influenza have decreased in area of prevalence.

Including reports by regular observers and by others, diphtheria was reported present, during the week ending July 21, and since, at twenty places, scarlet fever at twelve places, and measles at twenty-three places.

NOTES AND QUERIES.

AN AUTHOR WANTED.

To the Editor of The Medical News.

Sir: Would you be kind enough to give the following verses, Latin and English, an insertion under "Notes and Queries," in the hope that some of your subscribers may inform us who is the author of the Latin?

They are to be found quoted by Drs. John Ring and Benjamin Waterhouse in their respective sketches of the life of Edward Jenner, in honor of the discoverer of vaccination. (See Ring, Treat. on Cow Pox, part ii., Lond., 1803, p. 915, and where Ring cites it as given in the treatise of Dr. De Carro on vaccination, also in appendix to Waterhouse on Kine Pock, part ii., Cambridge, 1801.)

"Te mater omnis, te lachrymabilis
Accurret uxor, ne caducum,
Orba virum, puerosque ploret;
Seu confluentes forte timet notas
Decora virgo—tu faciem eripis
Periclitantem, protegisque,
Delicias juvenum futuras."

"To thee shall weeping wives and mothers fly,
Or see their husbands and their children die:
To thee the virgin trust her lovely face,
Or some rude blemish rifle every grace.
Oh! hard the perils that around her wait,
Oh! shield her beauties from impending fate,
Nor let a cruel pestilence destroy
The hope of youth and pledge of future joy."

J. R. Q.

Baltimore, July 23, 1883.

THE USE OF THE LIBRARY OF THE SURGEON-GENERAL'S OFFICE.

To the Editor of The Medical News.

Sir: I have heard and read so much concerning the Library of the Surgeon-General's Office that I hope you will pardon the liberty I take in inquiring of you if the library is available to physicians throughout the country; and if books are loaned outside of Washington, I will deem it a great favor if you will inform me how I should make application for their loan.

Yours, very truly,
***, M.D.

Albert Lea, Minn., July 20, 1883.

In answer to the above, we have received the following note from the Librarian of the Surgeon-General's Office:

Library of the Surgeon-General's Office,
U. S. Army,
Washington, D. C., July 25, 1883.

To the Editor of The Medical News.

Sir: In reply to your inquiries, I am directed by the Surgeon-General to state that books are loaned from this library to other libraries which undertake to be responsible for them, and have suitable buildings for their safe preservation.

Books which can be readily replaced, if lost, are also loaned to individuals upon their making a deposit, with the Librarian, of funds sufficient to make good any damage or loss. Books must be transmitted, each way, by express, and not by mail, and the cost of this expressage must be paid by the borrower. The funds deposited with the Librarian are, of course, returned when the books are received back in good condition.

Very respectfully, your obedient servant,

John S. Billings,
Surgeon U. S. Army, Librarian
Surgeon-General's Office.

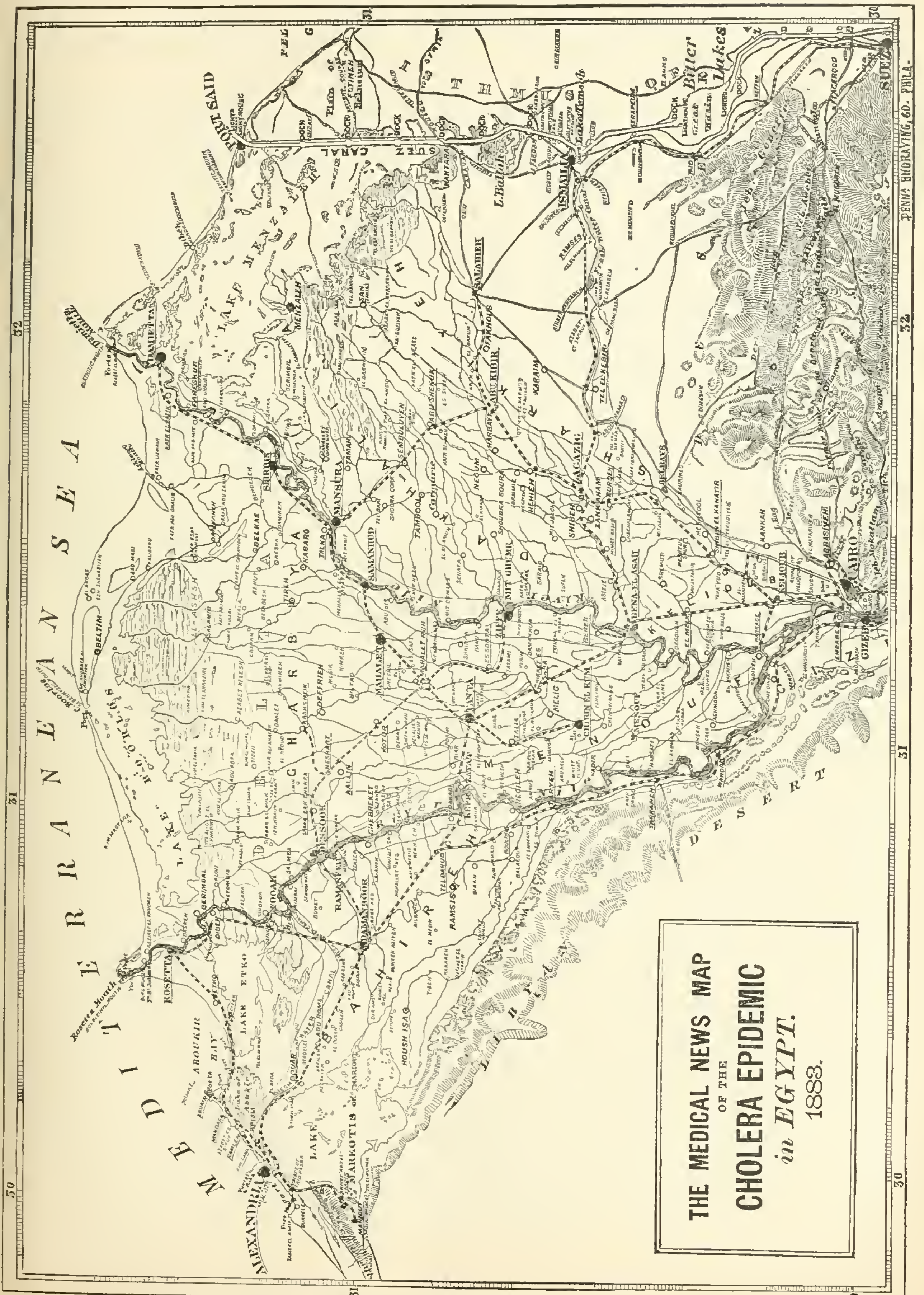
OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JULY 23 TO JULY 30, 1883.

Sutherland, Charles, *Colonel and Surgeon, Medical Director, Military Division of the Pacific and Department of California.*—The leave of absence granted by S. O. 64, Headquarters Military Division of the Pacific, June 30, 1883, is extended two months.—*S. O. 168, A. G. O., July* 23, 1883.

Baily, Joseph, *Major and Surgeon.*—Assigned to duty as Post Surgeon at Fort Concho, Texas.—*S. O. 87, Headquarters Department of Texas, July* 19, 1883.

Turril, H. S., *Major and Assistant Surgeon.*—Granted leave of absence for one month, to commence September 1, 1883.—*S. O. 77, Department of the Platte, July* 26, 1883.

Appel, A. H., *First Lieutenant and Assistant Surgeon.*—Granted leave of absence for two months, with permission to apply for an extension of one month.—*S. O. 30, Headquarters Military Division of the Atlantic, July* 20, 1883.



THE MEDICAL NEWS MAP
OF THE
CHOLERA EPIDEMIC
in EGYPT.
1883.

TO BE CUT OFF AT THE HEAVY RULE FOR FUTURE READY REFERENCE.

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. XLIII. SATURDAY, AUGUST 11, 1883. NO. 6.

ORIGINAL LECTURES.

OSTEOTOMY UPON THE LEFT SUPERIOR MAXILLA FOR THE REMOVAL OF POST-NASAL FIBROUS POLYPUS.

A Clinical Lecture, delivered at the Pennsylvania Hospital,

BY D. HAYES AGNEW, M.D., LL.D.,

PROFESSOR OF SURGERY IN THE UNIVERSITY OF PENNSYLVANIA, AND ONE OF THE SURGEONS TO THE HOSPITAL, ETC.

(Reported by CHARLES BAUM, M.D.)

GENTLEMEN: No doubt some of you will recall this boy as the patient from whom I removed a portion of a post-nasal fibroma, or fibrous polypus, one week ago. The reasons for not completing the extirpation of the growth at that time were the failure to obtain the consent of his parents for more decided measures, and the numerous attachments of the polypus.

The following history has been obtained from the mother of the boy:

Thomas T., æt. 14, of Irish parentage, was born in Tioga Co., Pa. With the exception of a decided phthisical tendency, the family history is negative. The patient has always been healthy, and very active, working at times in the coal mines. Until about seven months ago he was perfectly well, when he began to have slight obstruction to respiration in the left nostril, at the same time beginning to breathe with the mouth open, and to snore at night during sleep. About the same time, unprovoked epistaxis occurred, and has recurred frequently. His sense of smell began to be blunted on the left side, and, contrary to his natural disposition, he grew very drowsy during the early hours of the day. About one month later (six months ago), a pea-sized body was felt in the left nostril, and a choking sensation was experienced while laughing or crying. No dysphagia was experienced with fluids or solids. About four months ago, the vision of the left eye began to grow dim, and the nose became enlarged and disfigured, while all the symptoms increased in severity. About five months ago (January 2, 1883), he was subjected to an unsuccessful attempt to remove the growth, during which there was profuse hemorrhage, and at which time an incision was made in the left ala nasi, resulting in a V-shaped deformity. Such incisions I would advise to be made at the junction of the alæ nasi with the tissues of the face. In two weeks the growth protruded from the left anterior naris, in color and general appearance resembling flesh. To the touch it was firm and resisting, and was not painful. Three unsuccessful attempts at extraction followed within three months, each being accompanied by profuse hemorrhage, and after which the growth advanced more rapidly, and the patient lost flesh and strength.

On the 24th of last month, he was admitted to my wards. He is of ordinary size, slightly pale, with black hair, long eyelashes, and naturally a fair skin. Upon admission, from the left nostril protruded a dense, firm, fleshy growth, about the size of a chestnut, the surface of which was ragged, and covered with mucus and blood-clots. At present, the protruding portion has increased to about twice that size. The left side of the face is bulging, the eye partly closed, caused by the extension of the growth, and giving the peculiar visage known as "frog-face." When a finger is introduced through the mouth, the growth is felt to be attached to the posterior surface of the septum narium, the left pterygoid process of the sphenoid bone, the walls of the pterygo-palatine space, and the basilar process of the occipital bone.

Morbid growths, both benign and malignant, develop in the nasal passages.

The soft, mucous, or gelatinous polypus constitutes a very large proportion of all such growths. The symptoms indicating this variety of growth are a fulness in the nose, a mucous discharge, and inability to respire with freedom, especially during damp or rainy weather. As the growth increases, all the symptoms are aggravated.

The symptoms which accompany fibrous polypus, or nasal fibroma, may not at first differ from those observed in soft polypus; but as the growth advances, the obstruction to respiration becomes constant, there is frequent epistaxis from embarrassed venous circulation; ulcerations occur, furnishing a sanious and purulent discharge, and the health of the patient is apt to suffer.

In the diagnosis of nasal growths, the sight and touch are invaluable aids.

The translucent appearance, gray color, soft, elastic, pulpy consistence, mobility, hygrometric variations, slowness of growth, and indisposition to bleed on pressure are striking characteristics of soft polypus.

The opacity, flesh-like appearance, firmness, and resistance on pressure, more rapid growth, epistaxis, the unaltered condition in variations of the atmosphere, pedunculated form, tendency to produce deformity of the face and nose, and the occurrence before puberty, as a rule, will point to nasal fibroma, or fibrous polypus.

Although sarcoma and carcinoma possess some of the features just mentioned as belonging to fibrous polypus, yet, in the former, the growth is less firm, more rapid in increase, less liable to hemorrhage, with but little tendency to be pedunculated; occurs after twenty years of age, and tends to produce a dyscrasia. In the latter, or carcinoma, the occasional implication of the lymph-glands and the general cachectic appearance of the patient indicate the malignant disease.

Bony and cartilaginous tumors may be distinguished from polypi by their hardness and feel, when touched with a probe.

These fibrous polypi take their origin from the periosteum covering the walls of the nasal and much more frequently the naso-pharyngeal regions.

The treatment of nasal fibromata will interest us most at present. Repeatedly I have succeeded in twisting such a growth from its attachment by grasping it between two fingers, introduced through the mouth of the patient. When situated on the basilar process of the occipital bone, I have passed a chisel along the inferior nasal meatus, and have shaved the polypus from the bone, as practised first by Gross. Various osteoplastic operations have been proposed and executed in order to expose these growths.

After a consultation with my colleagues, Doctors Hunt and Morton, the operation of cutting the superior maxillary bone from all its connections save one or two, which are to serve as a hinge, thus exposing the growth, and enabling the bone to be replaced again, has been determined upon, and the steps of which I will indicate. After dividing the upper lip in the median line, I will carry the incision around the left nostril, and up along the side of the nose to within half an inch of the internal commissure of the eyelids; then will carry it just below the lower border of the orbit, across the malar bone to its zygomatic process. The periosteum will be divided, and the muscles turned back. The tissues of the hard palate will be divided in the median line, and at a right angle to it, at the junction of the soft palate, leaving the latter intact. After extracting the left central incisor, by means of a fine saw and cutting bone-forceps the connections of the bone will be separated, except at the posterior attachment, which is to play the part of a hinge. By turning the superior maxilla back, a full view of the nasal and post-palatine recesses can be obtained. The amount of blood which may be lost, no doubt, will be large; and should the bleeding not cease spontaneously, styptics and the cautery will be employed to arrest it.

Having freely exposed the growth, I find it has invaded, to a greater or less extent, all the irregularities of the nasal and post-palatine regions, and has extended into the left antrum and lachrymal canal. Very firm attachments bind the polypus to the basilar process of the occipital bone, to the left pterygoid process of the sphenoid bone, and to the spheno-maxillary and pterygo-maxillary fissures. No attachment exists to the bones in the nasal cavities. In general outline, the growth resembles a hammer, the head from which the attachments spring being about the size of a walnut, while the handle, corresponding in length to the nasal meatus, is capped by the portion which protruded externally from the anterior naris. In consistence, it is firm and resisting, and has the general appearances of a fleshy mass.

The hemorrhage having been arrested, I will replace the bone, and, in order to retain it in position as accurately as possible, will drill the bones below the orbit, and secure the approximation by means of silver wire. In addition, the palate processes will be retained in proper relation by wire adjusted to the upper incisor teeth.

The patient, as you observe, has suffered somewhat from the shock of the operation. After being removed to the ward, dry warmth will be applied to his body and extremities.

This is the sixth operation of this character and for this cause that I have performed.

Note.—Separation having occurred at the hinge on the ninth day following the operation, the left superior maxillary bone was removed through the mouth.

After the lapse of two months the patient was discharged. During this time no evidence of return of the disease was detected. His general condition was vastly improved, having regained his healthy color and much flesh. The external deformity following the operation was trifling, only a slight depression in the cheek being present. The voice was altered, partaking of the character of the so-called "nasal tone." During deglutition, solids and liquids were prone to escape from the left nostril.

After the expiration of five or six months, when the tissues shall have contracted and hardened sufficiently, a plate with artificial teeth attached will be inserted, which will improve the quality of the voice and most probably effectually overcome the difficulty in deglutition.

ORIGINAL ARTICLES.

THE ALIPTIC ART.[1]

By FREDERICK PETERSON, M.D.,
OF BUFFALO, N. Y.

About three years ago I read in *Epictetus* a sentence which set me at making researches. It was part of a short dialogue which ran this way:

"Well, have you already considered about entrusting the care of your body to any person?"

"Certainly."

"To a man of experience, I suppose, and one acquainted with the *aliptic art?*"

"Without doubt."[2]

It was these few words which set me thinking and reading, and the material which I then collected I have never until now found time to bring into the shape of a paper upon the *aliptic art*—an art now counted among the lost, but destined to very speedy revival.

Connected with the Roman baths,[3] and also practising by themselves among the Greeks and Romans, were certain men known as aliptæ, and it was their profession to anoint and rub the bodies of their patrons. The rubbing we call to-day *massage*, but the important feature of using oil has been neglected. The aliptic art, then, is the rubbing of the body with oil.

We know so little of the actions of most of the drugs we use in our practice, our knowledge is so uncertain, so false, that the wisest now turn their attention chiefly to hygiene and diet, leaving mystical therapeutics to more credulous, perhaps more empirical minds. To be sure, we can relieve pain, but we are always really treating symptoms and seldom are able to get at the cause of the disease, even if we make a correct diagnosis before death. We have much to apply to the relief of the suffering, if we make use of the accumulated knowledge and experience of this age, with regard to the value of sunlight, of fresh air, of certain foods, of exercise—and their proper application requires nowadays great study.

We seek remedies and effects which are tangible, palpable, and not occult. The aliptic art is one of these. It combines exercise with nutrition. Though the ancients may not have known the reason of its beneficial results, they had sufficient experience of its value in the treatment of disease; and something of what old Jewish, Arabian, Greek, and Roman writers have recorded for us with regard to it, I propose now to relate.

Josephus, in speaking of the case of Herod, mentions the use of the oil-bath in the treatment (*Dict. Ant.*, B. 17, chap. vi.). Isaiah alludes to the use of oil as a remedy (I. 6). Dr. Smith, in his *Dictionary of the Bible*, says, "As is the case generally in hot climates, olive oil was used by the Jews for anointing the body, after the bath and before an entertainment. To be deprived of its use was a serious privation, assumed voluntarily in time of mourning and calamity." Strabo says the Egyptians used castor oil for that purpose. With regard to its use in baths by healthy people, I may quote from Becker's *Gallus*, "The daily bath, and previous to it, strong exercise were inseparable in the minds of the Romans from the idea of a regular and healthy mode of life." The Romans were anointed in preparation for the bath and athletic sports. As a rule, after friction with flour, soda, etc., the hot bath, the cold plunge, they underwent frictions with oils or ointments. Hippocrates[1] speaks of inunction as calefacient, moistening, and emollient. Celsus and Haly Abbas recommended inunction before the bath. Galen used oils before and after with rough towels. Oribasius, Galen, Aëtius, Avicenna, and Gentieis Fulginas used a fifth part of heated oil in a water-bath for fevers, convulsions, retention of urine, nervous pains and lassitude. Mengus Faventinas used it as an anodyne. Paulus, in his chapter on preparatory friction, says, "Before gymnastic exercises the body ought to be rubbed moderately, first with towels, and then with oil in the hollows of the naked hands, until it be properly warmed and softened, and its surface have contracted a florid blush, and become distended." Of the oils used, Paulus speaks farther, "Some are moderately heating as oils of lilies, marjoram, iris, and saffron. Some are dessicative and cutting as oils of elaterium and privet. Some are powerfully heating and tonic, as oils of Chian mastic, must and nard. The most tonic is that prepared from wild olives. Some oils are used by women for their fragrance, as the oil of musk." Alexander Aphrodiensis says the object of its use among the ancients before all strong exercises was to soften the parts so they might not easily be ruptured. Horace says of a lazy person, "*cur olivum sanguine viperino cautius vitat.*" (Lib. 1. c. 8.)

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[1] Read before the Alumni Association of the Medical Department of the University of Buffalo.

[2] Epictetus, trans. by Long.

[3] *Vide* Celsus on the Alipterium. Stobaeus and Baccius, De Thermis.

Martial describes ceroma used by the aliptæ as a mixture of oil and wax. Thucydides states that the Lacedemonians were the first who rubbed their bodies with oil before wrestling; and Pliny says the custom was introduced into Rome by the Greeks. Athenæus, says Antiochus Epiphanes, supplied the Daphnean wrestlers with oils of saffron and marjoram. Lucian has Solon to say to Anacharsis that oil acts upon the living body as upon leather, softening and making it less liable to rupture. The poets describe the gods as using inunction, as, for instance, Sophocles and Callimachus. So great a necessity was oil to the Romans that the empire supplied it gratuitously in all the public baths according to Lampidius. Now, as to what the ancient physicians thought of the action of inunction, I quote Paulus Ægineta, who says: "Hard friction contracts, and soft relaxes." Hippocrates and Celsus say: "Violent friction hardens the tissues; gentle softens; long-continued diminishes; moderate increases." Galen, Aëtius, Oribasius, Avicenna, and Haly Abbas agree to this verbatim. Averrhœs states that "hard friction lessens obesity; moderate removes emaciation." Democritus, who was something of a wit, remarked that the health is best kept by lubricating inside with honey, and outside with oil. It was the custom to make use of friction and inunction morning and evening. Now, to speak particularly of the diseases in which the aliptic art was used, for in describing an art so nearly lost as this, I must bring in the ancient physicians as being the chief witnesses to its efficacy, let me take the following:

They used locally in gout, rheumatism, and chilblains, hot oil and friction. Rhazes says the common people put a finger with a felon into hot oil. In all superficial pains, friction with oils was made use of. Celsus says Asclepiades trusted almost entirely to gentle inunction in the sleeplessness of fevers. This was also practised by others. Warm hip-baths of oil and water were used in satyriasis and dysmenorrhœa. Friction with a discutient oil was used by Galen and Paulus in forms of jaundice to allay the irritation of the skin. Paulus says in obstruction and contraction of the pores of the skin, anoint bodies with a sweet and thin oil, of moderate heating quality, like oil of dill or black poplars. The Greeks, Romans, and Arabians all unite in the statement that in tetanus there is a remarkably good effect from the use of hot oil-baths and gentle friction. This certainly should appeal to us for trial, who have exhausted all the poisons of the pharmacopœia hopelessly in treating this disease. In all sorts of tremors or chills, whether from old age, debility, cold, wine, or disease, inunction was practised successfully, the oil of chamomile, privet, iris, or wax with pepper, or simple baths of hot oil being used. In asthma, pneumonia, and other chest diseases, external friction with stimulant oils, such as those of dill, rue, and iris, was used advantageously in connection with internal remedies. Paulus recommended rubbing the whole body with hot oil in hemoptysis. Inflamed breasts were treated with friction, and then wool soaked in hot oil placed upon them. In colic and cholera, a friction and hot-oil embrocations were employed. Friction with oil alleviated the pain in passing of renal calculi. Inunction was a favorite in enlargement of the liver, in bilious colic, ascites, anasarca, and tympanites, where, though not curative, they were anodyne. Of alopecia, Paulus says: "I have seen many have their hair reproduced by friction with oil alone." Serapion, Avenzoar, and others used hot or cold oils in the same manner and with great success upon the head in headaches. Paulus and Haly Abbas recommended inunction in the stupor of some of the acute diseases. Friction of the feet was used as a revulsive in all brain diseases, while the head was anointed and rubbed, especially in vertigo, epilepsy, apoplexy, and paralysis. In paralysis, Paulus says, "Our greatest dependence is upon friction." Tepid oil-baths, with gentle friction, were very beneficial in their hands in convulsions. In profuse sweating, they had with oils and friction splendid results.

The oils used were of a styptic nature. Paulus used oils of apples, lentisk, roses, myrtle, or pomegranates; Haly Abbas, Alsaharavius, Avicenna, and Rhazes using the same, all preferring, however, the oil of roses or myrtle. It seems to me this treatment might be tried nowadays before attempting to use poisons like atropia or pilocarpin. For the dry, hot, rough, and disagreeable tongue of fevers, these ancient physicians were accustomed to order rose oil and honey to be rubbed in, and this might often be used nowadays. In smallpox and measles, which no Roman or Greek author mentions, Rhases, the Arabian, the first to describe these diseases, used friction to bring out the eruption, and warm oils to remove the scabs. In syncope, Galen and Paulus give rigid rules, followed by most of their successors of that day, to rub the body first till glowing with a dry linen cloth, and then to apply some relaxing oil. Hard friction was used by them in somnolency, and also in insomnia. Rhazes says he cured himself of sleeplessness, caused by too much study, by inunction of oil of water-lily. In ephemeral fever soft friction with emollient oils was used by all of the physicians of that day. Oil and friction were ordered by them in other fevers, in septicæmia, or as they called it, putrid fever, in hectic, and in all the continued and intermittent fevers. Celsus lays down for the last stringent rules, "*oleum, frictio, vinum.*"

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[1] V. Sydenham Soc. translations of ancient authors.

Inunction was used not only to diminish obesity, but to remedy emaciation. Hard rubbing with oils of dill, marshmallow, gentian, or wild cucumber, was of greatest use in obesity. Indeed, Avicenna says nothing reduces obesity as much as frequent baths and hard inunction. In emaciation, very gentle friction with some emollient oil is extremely beneficial, the oil being nutritious, and the soft rubbing stimulant to the tissues. For atrophied portions of the body Paulus, Oribasius, Aëtius, Galen, Rhazes, Haly Abbas, and Avicenna recommend first cold effusion, followed by rubbing with towels and hot stimulant oils. Where the skin is dry and parched, friction with stimulant oils, such as those of chamomile, dill, bays, and violets, often produces perspiration.

Celsus renders to Asclepiades the honor of having invented friction. The latter, in his book on "Common Aids," wrote largely concerning it. Celsus, in his chapter on that subject (Book II., cap. 14, tr. by Collier), speaks of inunction as a means of producing sleep. He says friction relieves long-standing headaches, and often reëstablishes use in paralyzed limbs. In collapse he says we can only put our trust in proper friction, which may revive so far as to admit of other measures being taken. The quality of oil as a poor conductor of heat was known to them. Pliny says oil protects both from cold and heat.[1] They took advantage of this useful property of oils. The soldiers under Alexander the Great rubbed their bodies with oil of sesame, according to Quintus Curtius, when crossing the Baltian Mountains. Xenophon (Anab. Lib. 4) tells how his Greeks, exposed to extreme cold, rubbed themselves before their fires with lard, turpentine, and oils of sesame and bitter almonds. The Carthagenians under Hannibal did the same, according to Florus, among the Italian Mountains. That it is equally protective against heat, witness the inunction practised by the races living in the torrid zone. Averrhoes directs friction with oils for persons who suffer when exposed to the sun.

I have brought out this array of historic facts, not so much to make a short story long, as to show how universal the aliptic art was in past ages. Compared with its everyday uses then, it may well now be called a lost art, and one meriting, for many reasons, recovery. Some years ago, under the name *massage*, the French brought the aliptic art again into vogue, taking the word from the Greek *masso*, to knead, and of late years the Swedes and Germans have carried it into something of its ancient repute. At the same time, though now we use the French word *massage*, and speak of those who practice it as *masseurs* and *masseuses*, it cannot truly be said that it has ever fallen into absolute disuse. Here and there, in the history of diseases in past centuries, we find the aliptic art of the Jews, Greeks, Romans, and Arabians present in ghostly form. I quote the following from *Copland's Medical Dictionary* (vol. iii. pt. 3, pp. 227–8): "Many years ago, frictions of the surface with warm olive oil were much recommended by Baldwin[1] and others in the treatment of the plague, with the view of promoting a copious sweat, which seldom failed of supervening. The practice was common in the East from the earliest times. Several experienced writers are much in favor of it, and the evidence is very conclusive as to its diaphoretic operation when employed externally. Mr. Jackson, in his account of the destructive plague in Morocco, in 1799, recommended it to many, both as a preventive and a cure; and he states that in both characters it was eminently successful."

In 1781, Pichler[2] wrote a little book on the use of inunction in various diseases. In 1799, Trinder published a work entitled, *The English Olive Tree; or, a Treatise on the Application of Oil to the Human Body*, which ran through a third edition in 1812. In 1803, Pienitz,[3] a German, wrote a book upon the therapeutic and dietetic uses of friction and inunction. In 1809 appeared a work by Frank,[4] a Frenchman, on the same subject, followed in 1810 by that of Dähne,[5] a German, recommending the rubbing in of oil in scarlet fever.

In 1822, Zavagli,[6] an Italian, wrote a brochure over the successful use of inunction in ascites. In 1844, appeared another book on the efficacy of oil

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[1] Nat. Hist. xv. 6. Oleo naturo tepefacere corpus, et contra algores munire; eidemque fervores caputis refrigerare.

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[1] G. Baldwin, Osservazióni circa nuovo specifico contra la Peste. Firenze, 8vo. p. 74

[2] J. F. Pichler, De oleorum unguinosorum usu in morborum medela.

[3] J. C. Pienitz, De frictionis unctionisque usu therapeutico et dietetico.

[4] L. Frank, Remarques sur l'emploi des Frictions huileuses comme moyen préservatif et comme remède la Peste.

[5] C. F. Dähne, Beiträge zur Aetiologie und Kur des Scharlachfiebers, nebst Empfehlung der Einreibung von Oel gegen dasselbe. (*Vide* Brit. and For. Med.-Chir. Rev., July, 1858, p. 155.)

[6] Zavagli. Della Unzioni Oleose.

in the treatment of the Levantine plague.[1] Schullmann, in 1848,[2] wrote a book with the title, *A Certain Cure of Scarlet Fever by Means of a Method, New and Wholly without Danger.* This method was the inunction of bacon-fat, by means of which the dryness of the skin disappeared, the itching stopped, the circulation of the blood was promoted, and the period of desquamation was modified. "Owing to the fatty covering, the skin is kept moist, and the cuticle prevented from being driven about the room by currents of air, and thus one fertile source of infection is kept closed up." Schullmann published a second volume,[3] in 1853, concerning massage with oil in scarlet fever and measles.

In 1850, Taylor[4] wrote a work on friction with lard and beef-suet, giving cases of cure of typhus, scarlatina, measles, dropsy, nervous diseases, delirium tremens, and hydrocephalus. Then appeared works by Bauer,[5] La Pierre,[6] a history of inunction by Simon,[7] and a volume by Mole[8] on the same subject. The young English athletes are said to use the aliptic art nowadays as did the Greeks and Romans.[9] In the *Lancet*, of January, 1870, is an article on the use of warm-oil baths in the diseases of children, atrophy, bronchitis, convulsions, diarrhœa, fevers, and cachexias, which is summed up in this wise:

1. The skin action is more completely and permanently restored by this treatment.

2. The danger of reaction is avoided, for there is no sudden change of temperature; and moreover the sheet of oil protects the surface from atmospheric influences.

3. It acts as a fuel-food, not only preventing waste of tissue, but actually increasing the bulk of the little patient.

4. It does not depress, but on the contrary appears to exhilarate.

As regards the progress of the aliptic art, the literature is being added to every day. From time to time have appeared articles in our medical journals, one even in the *Popular Science Monthly*, of October, 1882. Perhaps Dr. S. Weir Mitchell has done more than any other in this country toward the revival of this art, and his marvellous cures in chronic cases of debility, nervous prostration, anæmia, emaciation, amenorrhœa, and even phthisis, as described in his little book on *Fat and Blood*, and sundry articles in journals, bear evidence to the efficacy of this treatment by massage, as he chooses to call it. It is significant that he requires the use of cocoa oil or vaseline in conjunction with friction, and hence we have, after a score of centuries, the art practised by the Roman aliptæ brought forcibly before us again, but the aliptæ are now dubbed *masseur* and *masseuse*, while the aliptic art comes to us in French disguise as *massage*.

The rubbing of the body with oil requires system. It cannot be properly carried out by a novice. It is more than mere friction of the skin. The aliptic art should be taught in nurses' training schools by competent lecturers and demonstrators. The accomplished aliptæ of to day must have some knowledge of anatomy, of physiology, have strong, soft hands, and a great deal of patience.

I cannot here go into details with regard to the method of rubbing. Suffice it to say, that beside friction of the skin, firm pressure is necessary, blows with the soft parts of the hand, and a kneading of the whole substratum of muscular tissue. The rubbing should be in the direction of the current of venous blood, and all the muscles of the body should be treated in groups, one after the other. The laws of Hippocrates with regard to friction are still applicable: "Violent friction hardens the tissues; gentle softens; long-continued diminishes; moderate increases."

Dr. Mitchell has shown that the temperature rises in patients thus treated, probably due to the active increase of the nutritive processes in the tissues which rubbing undoubtedly causes. The circulation is visibly increased in all parts so treated. The manipulations become exhilarating and soothing to the patient. The venous circulation being assisted by rubbing toward the heart, it is probable that the excretion of disintegrated matter and the entrance of arterial blood into the tissues are hastened. As to oils to be used, we have some that are simple, emollient, nutritious, non-irritant, and protective from changes in temperature, such as olive, cocoa, flaxseed, and sesame, then lard and suet, and the sweet principle of oils, glycerine, any of which can be made fragrant and grateful to the patient by the addition of a few drops of oil of roses, violets, lavender, or rosemary. We have a large number of oils which are stimulant and rubefacient, notably cajuput, anise, cinnamon, cloves, caraway, fennel, pepper, nutmeg, peppermint, and rue. Oil of sage is astringent, turpentine styptic, bitter almond oil sedative, croton and mustard irritant. Almost any quality of oil—astringent, rubefacient, anæsthetic, irritant, antiseptic—may be obtained by combination with different drugs.

For paralysis and many other nervous disorders, for all diseases accompanied by general venous stasis, for all the chronic inflammations, for insomnia, atrophy of the muscles, obesity, syncope, for superficial pains, for establishing collateral circulation after ligature of arteries, for obtaining healthy action of the skin, for exercise and nutrition of the body, and I may add for treatment of all specific infectious fevers—until we shall discover some medicine certainly destructive to specific bacteria—for all these the aliptic art is our chief scientific remedy.

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[1] Gräberz de Hemsö Observation authentique sur la Peste du Levante et l'efficacité de l'Huile contre cette maladie.

[2] C. Schullmann. Die sichere Heilung der Scharlach-Krankheit durch eine neue völlig gefahrlose Heilmethode. (Vide Br. and For. Med.-Chir. Rev., July, 1858, p 155.)

[3] *Idem* Die Fetteinreibungsmethode in ihren Heilwirkungen gegen Scharlach und Masern-Krankheit.

[4] W. Taylor On a new and successful treatment of febrile diseases through the medium of the cutaneous surface.

[5] H. Bauer. Die Oelkuren als Oeleinreibungen im Bad Sebastiansweiler, 1856. Des frictions d'Huile comme méthode hygiènique et curative, 1857.

[6] C. La Pierre. Die Inunctionskur. 1860.

[7] F. A. Simon. Geschichte und schicksale der Inunctionskur. 1860.

[8] B. Mole. Instruzioni e prescrizioni varie intorno all 'uso ed applicazione dell Olio medicamentoso: elimenti fondamentali di un novello sistema endermico. 1873.

[9] Lancet, Jan. 1876. Letter from headmaster of school.

CONGENITAL UNILATERAL ATROPHY.

BY SUMNER PIXLEY M.D.,
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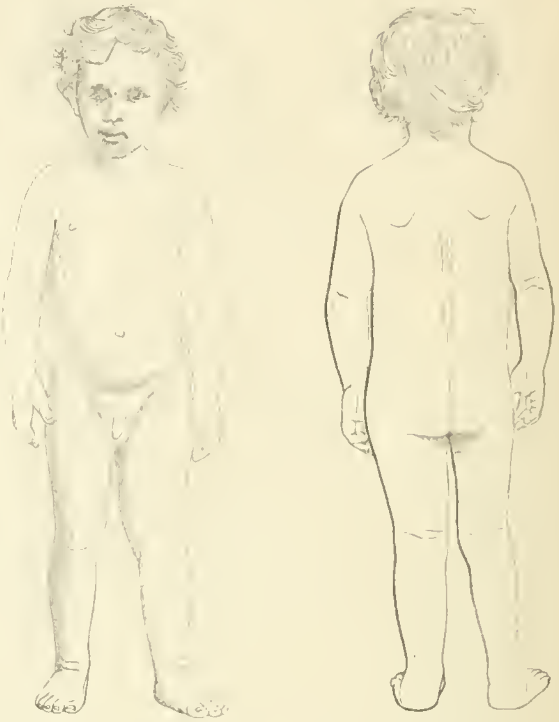
ON the twenty-second day of August, 1876, I was called to see Mrs. A. M., who was in the labor of her third confinement. (Her first child was a boy, who lived eleven days, and died of some disease of the lungs, as reported to me. Her second child, a girl, now nine years old, is well formed, and has always enjoyed good health.) There was nothing unusual in her labor. It was perfectly natural, the child, a boy, crying lustily as soon as born. I discovered at once *that the entire right side of the child was much smaller than the left*, a fact which caused much curiosity and speculation among the lady attendants present. From his birth to the present time the boy has been so healthy as to require no medical aid, but continues to grow with the same deformity that he had at birth. The exact measurements of the boy, taken at two different times, are as follows:

	Age, 4 years 6 mos. Height, 39½ inches.		Age, 6 years 6 mos. Height, 45 inches.	
	Right Side.	Left Side.	Right Side.	Left Side.
	Inches	Inches	Inches	Inches.
From sternum to spine, around point of shoulder,	$11\frac{5}{16}$	$12\frac{6}{16}$	$11\frac{8}{16}$	$13\frac{8}{16}$
Length of humerus,	$7\frac{6}{16}$	$8\frac{6}{16}$	9	$9\frac{12}{16}$
Length of whole arm,	$15\frac{3}{16}$	$16\frac{15}{16}$	$15\frac{12}{16}$	$17\frac{6}{16}$
Circumference of shoulder,	$7\frac{2}{16}$	$8\frac{10}{16}$	8	$9\frac{2}{16}$
Circumference of forearm,	$6\frac{11}{16}$	$7\frac{1}{16}$	$7\frac{10}{16}$	$8\frac{10}{16}$
Length of whole leg,	$18\frac{12}{16}$	$19\frac{3}{16}$	22	$23\frac{4}{16}$
Length of femur,	$10\frac{5}{16}$	$10\frac{9}{16}$	12	$12\frac{9}{16}$
Length of tibia,	$8\frac{8}{16}$	$8\frac{8}{16}$	9	$9\frac{8}{16}$
Circumference of femur,	$12\frac{2}{16}$	$14\frac{6}{16}$	14	16
Circumference of knee,	$10\frac{2}{16}$	$11\frac{1}{16}$	$11\frac{4}{16}$	$12\frac{3}{16}$
Circumference of chest, over nipple,	$10\frac{2}{16}$	12	11	$12\frac{4}{16}$
Circumference of abdomen, over umbilicus,	$11\frac{4}{16}$	$12\frac{6}{16}$	$12\frac{6}{16}$	$13\frac{2}{16}$

The right side of the head is much smaller than the left, and the superior and inferior maxillary bones of the right side are so diminished in size that the teeth do not touch within one-sixteenth of an inch, consequently all fine mastication is performed on the left side of the mouth. The first incisor of *left* superior maxillary made its appearance at eleven months, and in the inferior maxillary soon afterward. The remainder of his teeth on this side came in regular order to the full number. The first incisor of *right* superior maxillary made its appearance at seventeen months, and the first of the inferior maxillary at twenty months, the rest following in regular order, with the exception of the last molar, which has not yet appeared. Motion, temperature, and sensation in both sides are alike, and his intellect is equal to children of his age. He is right-handed, his tongue, when protruded, points to the right, and in erection his penis points towards the right side. There has been no hereditary taint in his ancestors as far back as I can trace. The appearance of the boy is well shown in the illustrations from photographs taken at the time the first measurements were made.



ACUTE TONSILLITIS,

AS OBSERVED AND TREATED IN THE DEPARTMENT FOR DISEASES OF THE THROAT AND NOSE OF THE PHILADELPHIA POLYCLINIC AND COLLEGE FOR GRADUATES IN MEDICINE.—EFFICACY OF THE COMPOUND GUAIAC GARGLE AND OF THE SALICYLATE OF SODIUM.

BY S. SOLIS-COHEN, A.M., M.D.,
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FOR therapeutic purposes, according to the teaching of Prof. J. Solis-Cohen, and as practised in his clinics, cases of acute tonsillitis may be divided into two classes: 1st, simple inflammatory or local; 2d, rheumatic or constitutional.

Each of these classes might be extensively subdivided, according to the most prominent objective or subjective, anatomical or pathological manifestations. Such refinement in nomenclature (for this alone is it, practically) is, however, unnecessary in arriving at the therapeutic indications. For whether the tonsillitis be unilateral or bilateral, or the two glands be affected consecutively—whether the inflammation be superficial or deep-seated, circumscribed or diffuse, limited to the follicles, or involving all the component structures—whether the morbid process be confined to the tonsil, or extend more or less widely among neighboring tissues—any particular case having been properly assigned to one of the two groups mentioned, its treatment need not be materially changed.

Of course, should suppuration threaten or occur, or should the enlargement of the tonsils be such that respiration becomes seriously impeded, incision, scarification, or other appropriate surgical procedure may be required. But when the patient is seen early, say within the first twenty-four hours, such accidents are very unlikely; if, indeed, the tendency to grave manifestations be not entirely averted. At all events, they did not arise in any of the cases treated at the Polyclinic.

The treatment has been as simple as it has been eminently successful; the principal reliance having been placed upon two remedial measures only, each of which seems entitled to be termed specifically appropriate for the particular group of cases in which it has been employed.

I. Simple Inflammatory Tonsillitis.—When the principal objective symptoms consist in alteration of voice, and more or less redness and enlargement of one tonsil, with or without swelling of the glands at the angle of the jaw; there being little constitutional disturbance; the pain complained of being chiefly due to tension; the odynphagia which is usually present having manifested itself after the swelling of the gland has been noticed; the disease may be considered as a local affection.

The treatment adopted in such instances is a modification of the old and well-tried *guaiac* treatment; and consists in the employment as a gargle of a mixture long known throughout the West and Southwest under the name of "diphtheria mixture" and similar titles. This is known in the House Pharmacopœia as the *Gargarysma Guaiaci Composita.* Two fluidrachms each, of the ammoniated tincture of guaiac and the compound tincture of cinchona, are mixed with six fluidrachms of clarified honey, and shaken together until the sides of the containing vessel are well greased. A solution, consisting of eighty grains of chlorate of potassium, in sufficient water to make four fluidounces, is then gradually added, the shaking being continued. If the apothecary is careful to make this preparation *secundum artem,* a not unpleasant mixture will be obtained. Without due care, however, the resin will be precipitated.

The patient is directed to gargle with this mixture freely and frequently, at intervals varying from every half-hour to every three hours. In some instances, a saline cathartic is first administered. Should any of the guaiac mixture be swallowed, it is considered rather beneficial than otherwise, and its deglutition is sometimes recommended.

Relief is usually experienced within a few hours, and recovery is prompt. Patients often return only to report their cure.

A young colored man had been attacked about eight hours before presenting himself at the clinic. When the writer saw him, there was great enlargement of the left tonsil, causing intense pain, and preventing deglutition of solids. The submaxillary gland and some of the cervical glands of the same side were so much swollen that he was compelled to bend his head down toward the right shoulder. This patient reported himself well, sixteen hours after coming under treatment. In his case, one ounce of Rochelle salts was first administered, and the compound guaiac gargle was directed to be used every two hours; but the relief following the first application was so grateful, that, in order to secure freedom from pain, the patient resorted to his medicine every half-hour or so.

A little girl of seven years was brought to the clinic with unilateral folliculous tonsillitis, a few hours after she had begun to complain of pain in her throat, and was told to use the compound guaiac gargle at intervals of two hours. She did not return until a month later—June 16—when she was brought for treatment of an acute coryza. Her mother remarked: "That medicine for her throat worked like a charm. She got worse for a few hours, but was well next morning."

Several similar cases of prompt relief could be cited in addition.

II. Rheumatic or Constitutional Tonsillitis.—When the first manifestation of the disease (excluding prodromata of headache, malaise, etc., which may or may not be present) is intense pain upon deglutition, causing great accumulation of saliva from unwillingness to swallow the excessive secretion; examination of the fauces revealing perhaps a slight congestion—perhaps nothing; more or less febrile reaction soon ensuing: the case may be assigned to the second or rheumatic group.

In these cases, the odynphagia cannot be explained by anything visible upon inspection. It is sometimes referred to a point representing the entrance into the œsophagus, and examination with the laryngoscopic mirror will show some redness of the mucous membrane covering the arytenoid and supra-arytenoid cartilages and the pharyngeal surface of the cricoid cartilage. More or less soreness in the throat is constantly present; respiration often becoming painful, and phonation excessively so.

Some hours after, as the headache, pulse, and temperature decline, one or both tonsils become enlarged; usually one consecutively to the other. The follicles are often distended with a caseous or sebaceous material, which, under the microscope, is seen to consist of scattered (pavement) epithelial cells, some oil globules, and a mass of granular detritus, mingled with which are the spores and filaments of the *Leptothrix buccalis, Oidium albicans.*[1] rod-bacilli. and other fungi, as usually found in the secretions both of healthy and of diseased tonsils.

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[1] Or something which I cannot distinguish from it. I have seen this fungus in but one case, and curiously enough, in this instance there were no aphthæ upon the mucous membrane covering the hard palate; though I have observed aphthous sores in several of these cases, and especially in the neighborhood of the incisor teeth.

Some drops of blood from an inflamed tonsil, in one of these cases, showed great deformity of the red corpuscles, and unusual size and number of the white corpuscles, which were more than ordinarily granular; but no micrococci could be detected therein A drop of blood from a finger of the same patient presented nothing abnormal.

Usually, as the pain in the throat subsides, muscular soreness occurs in the neck, back, and loins; oftentimes in the sterno-cleido-mastoideus of the side corresponding with the tonsil first enlarging. Sometimes the soreness is experienced in one or more of the limbs; and some one of the larger joints may become more or less stiff, though neither red, swollen, nor painful. Indeed, rheumatic or rheumatoid pains may flit from one portion of the body to another, during several days. In rare instances, transient albuminuria follows.[1]

These cases are treated with *salicylic acid* or *salicylate of sodium*. The constipation usually present, due either to the disease or to the remedy, is relieved with an appropriate saline cathartic.

The following formula makes a pleasant and efficient mixture:

℞.—Sodii salicylatis, ... ʒij.
Ol. gaultheriæ, ... ♏j (vel. q. s.).
Liquoris ammonii citratis,
Syrupi simplicis, ... āā f℥ij.—M.
S.—A tablespoonful every two hours.

As soon as the pains are relieved, the intervals are lengthened; or salicylate of quinine or of cinchonidine is substituted, as a tonic, in five-grain doses at intervals of four or six hours. Ringing in the ears (an occasional occurrence) calls for cessation of the salicylates; when it usually passes away. In one case, where persistent, it was relieved by small doses of the infusion of digitalis. During the progress of the more acute symptoms, the patient's comfort may be promoted by allowing small lumps of ice to melt in the mouth from time to time, or even by the use of the compound guaiac gargle.

Stiff-neck, the most annoying of the muscular complications, should it be severe, is relieved by faradization more promptly than by medication; the negative electrode being applied to the painful spot, or moved along the course of the sterno-cleido-mastoid muscle, the positive electrode being grasped in the hand of the same side. The same measure is, of course, applicable to other muscles.

HOSPITAL NOTES.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

Service of Louis A. Duhring, M.D.,

PROFESSOR OF DISEASES OF THE SKIN IN THE UNIVERSITY OF PENNSYLVANIA.

(Reported by Henry Wile, M.D.)

SCORBUTUS WITH FOLLICULAR PURPURA.

The patient before us, a Hungarian by birth, and speaking only his native language, can give us no information in regard to his condition. His history must remain blank. On examination, it is found that the lesions are, for the most part, confined to the lower extremities, and appear in the form of minute, pin-head-sized, dark-red, some confluent, but, for the most part, discrete spots, occupying the tissue around the hair-follicle. Passing the hand over the skin, we find it harsh and dry. Pressing on the spots with the finger, they do not disappear. They are plainly due to hemorrhages, and to no inflammatory process. These hemorrhages have taken place around the hair-follicles, and are by no means recent, as is indicated by that dark color.

The general surface of the body has a dark-yellow hue, and examining the general condition of the patient we find absence of fever, tongue normal, but the gums soft, spongy, and showing a tendency to bleed. With these observations, together with the lesions on the skin, we have no hesitation about the diagnosis. The dermal manifestations of this disease are of variable size. Here the lesions are small, often they are in the form of large patches. The disease is the result of malnutrition, want of fresh vegetables, fresh meat, etc. The treatment will consist mainly of a suitable nutritious diet. No local applications whatever are indicated.

CHRONIC TINEA TONSURANS IN A NUMBER OF BOYS.

Eight little boys, with ages ranging between seven and ten years, are sent here for advice on account of a certain chronic affection of the scalp. Coming from a large institution, and presenting lesions similarly located, and with similar appearances, naturally leads us to suspect a contagious disease, especially a disease caused by the presence of a fungus. The diseases occurring thus are two in number, *Tinea tonsurans* caused by the tricophyton fungus, and *Tinea favosa* caused by the *Achorion Schönleinii*. The latter is rare, but the former is quite common, occurring often endemically in large institutions for children.

When a number of such cases as these are brought before us for examination, the matter of the differential diagnosis is most important. For certain forms of eczema, seborrhœa, psoriasis, may simulate this disease so closely that nothing but the microscope will give the decision.

Where this disease once gets a hold in a large school or institution it becomes a difficult matter to cure it, and sometimes it defies every method of treatment. In regard to the prognosis, we must make a distinction between acute and chronic ringworm, always remembering that the acute form yields, as a rule, readily to treatment, while the chronic form may be exceedingly obstinate.

The first of these boys, about eight years old, presents, on the top of his head, a chronically inflamed spot about the size of a silver half-dollar, and over the vertex are small, pale, scaly spots. On none of the lesions is the hair absent, and seizing a hair with the forceps, we see it is not loose, and in extracting it considerable force must be used. The question is, have we here a case of seborrhœa, eczema, or ring-worm. We may exclude seborrhœa, on account of the infiltration and inflammation. The points in favor of eczema are the facts that there are no bald patches or loose hairs; yet the fungus sometimes attacks the epidermis, and not immediately the hair-follicle. In this case, the microscope alone can give satisfaction, but the disease is probably parasitic.

The second boy states that he has had the affection on the scalp for five years. The lesions have the same general characteristics as those in the first case. Having existed for such a long time, we should expect to find those short, broken-off hairs which are of special diagnostic value; but on examination we can find none. Where this disease is so chronic, and has been under different modes of treatment, it may become difficult to see those features which are characteristic. In this case, we also find on the back of the right wrist an irregularly shaped, ill-defined patch, about the size of a silver dollar. It is of five weeks' duration, irregularly round in shape, somewhat elevated, pale-red, and spotted with a scant amount of fine dry scales. It also has been modified by treatment, but it is *Tinea circinata*.

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[1] This has not been met with at the Polyclinic, but in private practice.

The third case is almost identical with the one just looked at; we find a similar scaly patch on the scalp, but without those broken-off hairs. Having been under treatment, we should judge that the cases thus far are on the road to recovery.

In the fourth case we have another picture, one which is eminently characteristic of *Tinea tonsurans*, where we find any number of those broken-off hairs. Here we undoubtedly have a clear case of chronic ringworm. This case presents on the scrotum and about the groins a papular and vesico-papular eruption, which has no connection with the other disease, but is distinctly eczematous in character.

The fifth case is much like the first. There are no broken hairs, but those present are matted down to the surface of the scalp, not with exudation, but with layers of dry, yellowish-white scales.

The sixth case presents a diffused patch similar to the others, but here and there the characteristically diseased hairs can be seen.

The last two cases present lesions, which in location and general appearance are like the foregoing.

Thus it is seen that only two boys show the disease typically, so that in these cases there can be no doubt as to the diagnosis. In the other cases the microscope will have to be resorted to before a positive diagnosis is given, but we may say that there is little doubt that all the cases are instances of the same disease. It is eminently a disease of childhood, adults never being affected. The skin of the adult seems to be no habitat for the fungus, so that when the patient becomes an adult the disease disappears. As this takes time, and as there is danger of infection, active treatment should always be resorted to.

As regards treatment of these boys, representing instances of chronic ringworm of the scalp, nothing short of a thorough, severe, and prolonged application, together with long-continued depilation can bring about a cure. Depilation is extremely important, it must be carried on systematically. As regards the value of parasiticides, a number of remedies are found useful, *e. g.*, sulphur ointment, ointment of the nitrate of mercury, ointment of the oleate of mercury, iodine, carbolic acid, and these remedies in various combinations. When the disease is circumscribed, applications of croton oil offer perhaps the best means of treatment, applied with a view of bringing about artificial kerion. The treatment is severe, but by no means so painful as one might suppose. Applications may be made every day or every other day, according to the sensibility of the scalp, a simple poultice being applied in the mean time. As soon as kerion sets in the hairs become loose, and are very easily extracted, after which cure sets in rapidly. Where the disease is diffuse, occupying the greater part of the scalp, a part only should be treated by croton oil; other parts may be treated with some parasiticide in the form of an ointment, *e. g.*, chrysophanic acid two drachms to the ounce. Where it is not advisable to use the oil, one of the ointments named above, or chrysophanic ointment may be applied together with depilation. The scalp in chronic ringworm stands strong remedies remarkably well, and there is little danger of getting the remedies too strong. Equal parts of ointment of the nitrate of mercury and sulphur, or equal parts of the oleate of mercury (seven per cent. strength) and sulphur ointment may be mentioned as useful.

As regards prognosis in cases of one or two years' standing, when lesions are diffuse, as in several of these boys, from six months to one year will probably be necessary to bring about a cure; other cases require a longer time, even two years will be necessary to bring about a successful result. This remark applies to bad, neglected cases in public institutions, where the scalp is dotted with broken-off hairs on a level with the skin. In these virulent cases, the disease often crops out in the face of active treatment, and this continues its course, being better and worse from month to month.

MEDICAL PROGRESS.

Bismuth Dressing.—The bismuth dressing recommended by Kocher has given excellent results in the hands of M. Riedel, of Aix-la-Chapelle, both in fresh and septic wounds. Its employment is in the highest degree appropriate for drying up the secretion on the surface of wounds and hastening the closure of their borders. This last effect is equally manifest when bismuth is applied to a wound of the pleura or peritoneum, as M. Riedel has observed from experiments on animals; this being due to a constant disengagement of very small quantities of nitric acid, which is endowed with a plastic action. This effect may be surpassed when very large quantities of the bismuth are applied, and eschars may result, though this has not occurred in sixty-one cases of various injuries, eight of which were complicated with erysipelas. On account of the occasional erysipelatous complication, M. Riedel has combined corrosive sublimate with the bismuth dressing. In twenty-three cases dressed with the combination there was no phlegmon, and only one case of erysipelas.—*Gaz. Méd. de Paris*, May 12, 1883.

Treatment of Zymotic Pyrexia by Inhalation of Ammoniated Chloroform.—So long ago as 1853, Dr. B. Ward Richardson treated a case of what was then called phagedænic croup by inhalations of the vapor of chloroform and ammonia in combination. In the epidemic which occurred at Mortlake at that time, he had found, on post-mortem examination of three fatal cases, separation of fibrine in the heart, and had assigned the cause of death to the resultant obstruction. He was led, thereupon, to administer ammonia very freely, by the mouth, in such cases, in order to maintain the fluidity of the blood. In the particular case to which he refers, the patient was a child, six years of age, who absolutely refused to swallow medicinal doses of ammonia. In the house in which he lived there had been a death of another child from the disease, and as, in this new case, death seemed certain, he determined to administer the ammonia by inhalation in combination with chloroform, the parents of the child yielding a willing assent to what they felt was, in fact, a last chance. With very little trouble, he produced a gentle narcotism with the combined vapors, and was then able to increase the quantity of ammonia considerably. He kept up the inhalation for fourteen hours, administering food by enemata. The patient began to breathe with comparative ease within an hour after the commencement of the inhalation. In the course of three hours, he had a loose cough, with expectoration, which was easily ejected, although there was continued sleep. The fever rapidly subsided, and, when the vapors were finally withdrawn, there was quick return of consciousness, with complete subsidence of the acute symptoms. The recovery was rapid and complete.

In connection with this subject, he was once led to inquire what effect the vapors of ammonia and chloroform alone and combined had on putrefactive changes. He learned thereupon that each vapor in its separate state is a remarkable antiseptic, and that the two act admirably in combination.

Experiments have yielded a demonstration of a specimen of blood which had been perfectly preserved in the fluid state, and free from any trace of decomposition during twenty years.

Recently he has recurred to his original plan of administering the vapors of chloroform and ammonia in combination in cases of zymotic fever, and thus far the practice seems exceedingly easy, and to promise valuable results.

He takes an alcoholic solution of ammonia (.838 alcohol saturated with ammonia), and mixes it in equal parts with chloroform or methylene bichloride. When the solutions are mixed, any separation of water that may occur is removed, and in this way a clear mixture of ammoniated chloroform is obtained ready for use. In administering this compound by inhalation of the vapor, two fluidrachms of it are put into a small Wolf's bottle, and the bottle connected with a leather inhaler armed with an expiratory valve. The mouth-piece of the inhaler is held close to the mouth, and the patient is instructed to inspire until bubbles of air are drawn pretty freely through the fluid in the bottle. The inhaler is in this manner charged with the vapors which are drawn into the lungs.

From the first, the ammonia vapor is deprived of much of its pungency by the presence of the chloroform, and in time, as the narcotic begins to take effect, the pungency of the ammonia is covered so effectually that larger quantities of it can be inspired without cough or irritation. During the past week, in a puerperal case, under the care of Dr. Rogers, in which he suggested this method in consultation, the patient inhaled freely every two hours for three days without the slightest discomfort, and with obvious direct advantage. The effects of the inhalation seem to him to extend in four directions: 1. Under the sedative action of the narcotic, relief from pain is obtained, and repose, if not actual sleep, is secured. 2. Under the combined influence of the vapors, there is reduction of temperature. 3. Under the influence of the ammonia, there is a sustained fluidity of the blood and a production of freedom of secretion. 4. Under the action of the combined vapors, there is an antiseptic result which is always favorable.

The principle is that through inhalation we should learn how to reduce zymotic fever at once, with direct precision, and without employing any of those medicinal agents which have to pass slowly into the system by absorption through the stomach, have to pass out of the system by slow elimination, and after all do not immediately command the position that ought immediately to be attained in the management of acute disease.

There are several vapors which reduce temperature more rapidly than those named, and it is probable that there are vapors less complex, and yet possessing the same properties. It is also probable that in some forms of zymotic fever, more or less alkaline vapor may be required than in other forms.—*Lancet*, June 9, 1883.

Wound of the Thoracic Duct.—M. Bœgehold, when assistant to Wilms, saw, during the extirpation of a tumor of the neck, a milky liquid flow from the wound, which proved to be chyle, and without doubt came from the thoracic duct. The wound was tamponed and the flow arrested. The patient recovered, but subsequently had a return of the tumor in the same place, which, on examination, proved to be carcinomatous. Bœgehold has not been able to find a similar example in medical literature.—*Gaz. Méd. de Paris*, May 12, 1883.

New Reaction of Urine and Milk.—M. Ch. Richet has discovered that iodohydrargyrate of potash, by the reduction of metallic mercury under the influence of organic substances, enables us to easily measure the extractive matters contained in the urine. This salt, which is decomposed by neither urea nor uric acid, is almost instantly attacked by the extractive matters, and is precipitated as metallic mercury. From a series of experiments, M. Richet has established the fact that there is a very close relationship between the quantity of urea and the amount of extractives in the urine. This reaction is not confined to the extractive matters of urine, but is applicable to other physiological secretions, as milk. It is known that milk contains a substance, the nature of which is but little known and possessing the reaction of ptomaines, which instantly throw down cyanide of iron from ferrocyanide of potash, and then, by the addition of a drop of neutral chloride of iron, give rise to the formation of Prussian blue.—*L'Abeille Méd.*, June 4, 1883.

Hydatid Cysts of the Spleen.—During the past twenty years, forty-seven cases of hydatid cyst of the spleen have been observed in five thousand patients in l'Hôtel Dieu de Rouen. Among these, the heart, muscular tissue, epiploon, broad ligaments, brain, and lungs, have been affected in twenty-three cases. The remaining twenty-four had had hydatid cysts of the liver, and in only one of these did the autopsy show simultaneous affection of the liver and spleen by the hydatids. Though there is no question as to the occurrence of primary cysts in the spleen, they are not frequent.

The diagnosis of splenic cysts is difficult. They simulate, in their onset and progress, functional troubles of other organs. A patient, whose history is reported by M. Gerin-Rose, gradually lost flesh for two years; he had epigastric pains for a year, digestive troubles, vomiting of black material, liquid stools, and inability to retain food, and presented the physical signs of cancer of the stomach, although the volume of the tumor was against this diagnosis; an exploratory puncture revealed its true nature, which was further substantiated by a post-mortem examination—an hydatid cyst of the spleen. In a case reported by Legroux, the patient had received a blow in the side three weeks before the appearance of the tumor. The rapid growth of the tumor led to a diagnosis of abscess of the abdominal wall by M. Robert, but Legroux detected the hydatid thrill, and his diagnosis was confirmed by the autopsy. When the splenic tumor exists simultaneously with a cyst of the liver, as in the case of a patient of M. Leudet, the latter is easily recognized during life, but the former will be obscured until the autopsy. As regards treatment, M. Sevestre punctures recent cysts with retractile walls, but in old tumors, Récamier's proceeding, incision with a bistoury and the thermocautery with strict antiseptic precautions, is preferable.—*L'Union Méd.*, June 23, 1883.

Extirpation of the Kidney.—Dr. Israel performed this operation on a young woman on May 6th. Simon's incision was used, commencing at the middle of the twelfth rib and running down for two and three-fifths inches. The disease was found to be pyonephrosis, as was diagnosticated. The patient died on the fourteenth day.—*Deutsch. med. Wochenschr.*, June 13, 1883.

Resorcine.—Braum has used resorcine in three hundred cases of ephemeral fever of infants, in which there was hyperpyrexia, and invariably it produced a fall of temperature to normal, and in a few cases also great lowering of the temperature with profuse perspiration. The usual dose was grs. xlv, repeated during the day, with no attendant nervous phenomena. In paludal fever resorcine is but very little, if at all, inferior to quinine. Ugo Bassi has reported 17 cases of recovery of 20 cases in which it was used. The dose varies from grs. xxx–xlv during twenty-four hours, to be given for several days. Its cheapness is an especial recommendation. Skibnewsky has reported two rapid recoveries from erysipelas after the hypodermatic injection of a one-twentieth solution. Between ten and twenty injections were made in the erysipelatous parts. These injections were followed in less than ten hours, not only by disappearance of the fever, but by an abnormal fall of temperature. It has been successfully used in parasitic skin diseases. Justus Andeer has recently reported a case of malignant pustule, with erysipelatous areola which had invaded a large part of an upper limb and was beginning to show signs of general infection. The case was cured in a few days by the application of a thick coating of resorcine and vaselin 50–100 to the affected limb, which was then enveloped by gauze and a bandage. On the following day the pain and tension had diminished, the surface of the limb was taking on a healthy aspect and the erysipelato-vesicular eruption disappeared. Resorcine produces no local irritation, does not produce hemoglobinuria as does naphthol, nor symptoms of poisoning, as do carbolic and pyrogallic acid, etc.—*L'Union Méd.*, July 19, 1883.

Hygienic and Therapeutic Properties of Cresses.—According to an analysis by M. Chatin, cress contains an essential oil of which the base is allyl, a bitter extract, iodine, iron, phosphorus, and certain salts. M. N. Gueneau de Mussy reports the case of a woman of sixty years who had been unsuccessfully treated for fifteen years for chronic eczema. The eczematous eruption had attacked the tongue and rendered deglutition painful and difficult. After ordering arsenic and other remedies without result, M. de Mussy prescribed a large quantity of water cresses every day. In five months there was very decided amelioration of the symptoms, and the eruption had entirely disappeared from the tongue. This prescription was equally efficient in another chronic case.—*Gaz. Hebdom*, June 22, 1883.

Case of Violent Hemorrhage from the Left External Auditory Meatus Following a Cold Abscess; Subsequent Rupture of the Left Internal Carotid, Causing Death in a Few Seconds.—Dr. R. B. Davy, of Cincinnati, reports the case of a little girl, three years of age, suffering from restlessness, coated tongue, sore throat, and slight fulness of the left side of the neck. In the act of examining the throat (the child resisting), an abscess of the left ear broke and discharged about a teaspoonful of reddish pus. After a few hours a violent hemorrhage from the ear set in, and in the course of two days fully a quart of blood had been lost. Most of this quantity was discharged at two bleedings, the pillows being stained only with small spots in the intervals. The hemorrhage ceased spontaneously, and for nearly a week the ear discharged pus, gradually losing the reddish cast. The auditory canal was now examined with reflected artificial light, and the membrana tympani found to be intact. The child was improving, though very pale. On the fifth day after the last hemorrhage, another quite as violent as the first occurred. The ear was now plugged with a bit of sponge, and the bleeding was checked. Simultaneous with the plugging, there appeared a swelling about the size of the longitudinal half of a hen's egg extending from the left mastoid process downwards and forwards. This swelling increased in size until late in the afternoon when the plug was forced out of the ear, the blood spurting at least a foot from the child's head, and the tumor diminishing in size. The ear was now more firmly plugged and ice-bags applied to the swelling, which had returned immediately. The next day the swelling was perceptibly smaller, and had a leathery feel on firm pressure; but the third day afterwards it again increased in size and showed signs of suppuration, though there was no pointing externally. On the following afternoon, the left internal carotid artery ruptured in the mouth, and the child bled to death in a few seconds. The post-mortem examination revealed at the site of the swelling a deep-seated abscess, whose contents had come in contact with and injured the coats of the vessel in question, causing them to give way. The loss of blood during the fatal hemorrhage amounted to but little over half a pint. Careful inquiry for a history of hemorrhagic diathesis was made, but no facts pointing to such a condition could be elicited. The Doctor concludes that the first hemorrhage was caused by ulceration of the coats of the posterior auricular artery.—*Cincinnati Lancet and Clinic*, July 21, 1883.

Trephining for Traumatic Rupture of the Middle Meningeal Artery.—Krönlein reports two cases. The first case, seen on the day after the injury, was in a profound stupor; no paralysis; pulse 58. Subsequently there was incomplete paralysis of the right leg, complete paralysis of the right arm, ptosis, and facial paralysis. Hemorrhagic effusion from rupture of the middle meningeal artery was diagnosticated, and Krönlein performed trepanning on the fourth day, but no extravasation was found. Post mortem examination showed a large hemorrhagic effusion, which had escaped from a branch of the middle meningeal, pressing upon the anterior central convolution.

The second case, male, æt. 60, had a fall, became unconscious, and passed into a comatose condition. The left side was paralyzed, there was slight facial paralysis, with relaxed sphincters, and retarded pulse. There was also conjunctival ecchymosis of the right side, doughy infiltration of the skin and soft parts of the temporal region, and pressure in that region seemed to be painful. Krönlein diagnosticated fracture, with rupture of the middle meningeal artery. The patient was trephined, and an extravasation found, there being also a depressed fracture pressing on the brain. A very large amount of coagula was removed. Two months after the operation, the patient was well, with the exception of slight paralysis of the face (mouth).—*Centralbl. für Chirurgie*, No. 28, 1883.

Puerperal Eclampsia.—Eclampsia, says Donati, should not always be considered as the clinical expression of identical pathogenic states. He gives three forms of puerperal eclampsia. 1. *Eclampsia from mechanical causes*, by compression of the aorta by the gravid uterus, giving rise to cerebral hyperæmia and œdema, with or without albuminuria. In primiparæ this form is caused by the resistance of the abdominal walls, and in multiparæ by tight clothes and hydramnios. 2. *Reflex eclampsia*, from vaso-motor troubles of the cerebral vessels under the influence of excitations coming from the nerves of the uterus. 3. *Toxic or dyscrasic eclampsia*, in anæmic, septicæmic, or other alterations of the blood. These forms are not always easily recognized in practice; yet each has its therapeutical indications. In the first, drastics, derivatives, and blood letting are indicated. In reflex eclampsia, chloroform, ether, opium, and chloral are indicated; and in the toxic form, purgatives or diuretics, according to the nature of the case.—*Gaz. Hebdom.*, July 20, 1883.

Alimentation of Young Children.—The following are the conclusions presented by the Committee to the Eleventh German Physicians' Association:

1. The natural food of children—mother's milk, is to be preferred above all others.
2. Only in case of positive contraindication, or non-appearance of the milk, should a wet-nurse be employed.
3. Only in case of impossibility of obtaining a wet-nurse should artificial food be employed.
4. The contraindication against the mother nursing is actual disease or a predisposition to disease.
5. Hereditary syphilis demands the milk of the mother; that of a wet-nurse should only be used with great caution.
6. Examination of a given specimen of milk furnishes no clue as to its value in a given case.
7. Good cow's milk alone is fit to take the place of woman's milk as food for the child.
8. The quality of good, sweet cow's milk, for a child which must be artificially fed, is one of the most important essentials in the hygiene of young children.
9. All childrens' foods, including Liebig's soup (food), on account of the large quantity of starch contained in them, are unfit for children during the first month.—*Berlin klin. Wochenschr.*, July 18, 1883.

Clinical Characteristics of Wool-sorters' Disease.—The following memorandum has recently been prepared for use in the inquiry now being conducted by Mr. Spear into the occurrence of anthrax amongst men employed in hide warehouses, tanneries, etc.:

The "Internal form" or Anthrax fever.—Premonitory symptoms (of variable duration): Chilliness, aching or stiffness of limbs, and mental depression; restlessness, sense of constriction of chest, and oppression of breathing; headache, dizziness, nausea, or, less frequently, vomiting. Stage of full development. Notwithstanding the indefinite premonitory symptoms, the stage of full development is generally somewhat sudden and unexpected in its onset, so as to cause much alarm. The prostration and restlessness become extreme; there are præcordial anxiety and dyspnœa; blueness of the face and extremities (cyanosis) is conspicuous; and the patient may die within twenty-four or thirty-six hours with all the appearances of collapse or of asphyxia. A fatal termination is, however, more often postponed until from two to five days after the commencement of this stage. Other nervous phenomena—muscular paralyses, convulsions, or tetanic spasms—are then likely to develop themselves; and evidences of various acute local congestions (especially of the lungs, less frequently of the gastro-intestinal tract) are rarely wanting. Delirium is often absent; and the temperature is irregular. Exacerbations, alternating with more or less complete remissions, of the more urgent symptoms constitute usually a striking feature of the disease. Recovery is not so rare as has been supposed, even in fully developed attacks; but death may occur from a relapse, or from secondary septic processes. The body after death usually undergoes rapid decomposition, with blue discoloration and swelling, especially about the neck.

[Before the disease was identified amongst the wool-sorters, deaths were usually referred to one of the more prominent local symptoms of anthrax, and were registered as from "pneumonia," "enteritis," "peritonitis," "meningitis."]

The "External Form" of the Infection, or Malignant Pustule.—The malignant pustule attacks almost always parts of the body habitually uncovered, and most frequently the face It commences as a small papule, which quickly develops into a vesicle, and this, being broken, pours out a little watery exudation. The base of the vesicle, and the surface immediately adjacent, dies; so that in about three days after its appearance the lesion consists of a small central black eschar, with a raised border of inflamed and tumid skin upon which vesicles are likely to be developed; a crop of secondary vesicles surrounding thus the central eschar like a wreath. The neighboring lymphatics and glands are speedily implicated; and the patient may soon lapse into the condition, described above, of constitutional infection. The pustule does not apparently always present this typical appearance; when occurring upon the hands such appearance is uncommon. It has then no central black eschar, no raised vesiculated border. It is described as "a small, slightly inflamed tumor, exuding only serosity; giving rise to comparatively little pain or even increased sensibility, but showing a tendency to set up a diffuse cellulitis." Constitutional infection may follow.—*Med. Times and Gazette*, July 21, 1883.

Action of Alkalies on Bile.—Lewaschew and Klikowitsch have recently made interesting experiments to determine the action of alkalies on the composition of the bile. Dogs, with fistulæ leading to the gall-bladder, were used but no canula was inserted. The animals were deprived of food and drink for twenty-four hours previous to the experiments. From these experiments it seems that artificial and natural waters have a similar action on the biliary secretion. The quantity of bile flowing from the fistulæ was diminished for some time after the administration of an alkaline water, an effect probably due to an increased flow of bile into the intestines. After this, however, the amount flowing from the gall-bladder rose above normal. The quality of the bile was the same whether artificial or natural alkaline waters were used, but with waters of different degrees of concentration, different results were obtained. The effect of carbonate of sodium on the composition of the bile was more rapid, lasting, and powerful than that of sulphate of sodium. Weak solutions were more powerful than strong and highly concentrated solutions. Consequently the mineral waters whose chief constituent was carbonate of sodium had most influence on the composition of the bile, and especially if the carbonate was not present in a highly concentrated form. The effects were earlier and more marked as the temperature of the waters ingested was raised.—*Centralbl. für klin. Med.*, July 7, 1883.

Treatment of Yellow Fever.—M. de Lacaille, of Rio de Janeiro, has recently sent a communication to the Academie des Sciences relative to the successful treatment of yellow fever by carbolic acid and carbolate of ammonia. He also stated that attempts had been made to vaccinate with a weakened ferment, presumed to be derived from the yellow-fever fungus.

Resection of a Pulmonary Lobe.—Prof. Ruggi, Surgeon-in-Chief to the Maggiore Hospital, at Bologna, recently resected the superior lobe of the right lung and a portion of the middle lobe in a woman, æt. 31, 31, for phthisical ulceration. Thirty hours after the operation the patient was in a wonderfully good condition.

DIMINUTION OF THE RED GLOBULES OF THE BLOOD DURING THE ADMINISTRATION OF IODOFORM.—From experiments made on rabbits and from observations on syphilitics, HOFFER concludes that: 1. Rabbits lose weight, and show diminution in the number of the red blood-corpuscles during the internal administration of iodoform. The variations observed correspond to the alternations of suppression or administration of the drug. 2. Hypodermatic injections of iodoform in syphilitics, is often followed by anæmia. The specific manifestations were at the same time subdued by the use of the drug.—*Gaz. Hebdom.*, July 20, 1883.

CASCARA SAGRADA IN CONSTIPATION.—MR. R. A. DOUGLAS LITHGOW, in stating his experience with cascara as a purgative, says: Cascara sagrada seems to act as a tonic to the pneumogastric and sympathetic supplies of the *primæ viæ*, aiding the general processes of digestion, whilst especially promoting those of nutrition and assimilation. At the same time, it so influences the secretory system as to increase deficient, and to improve and restore vitiated secretions, by regulating the action of proximate visceral and intestinal glands. From this it will be seen that its use is especially indicated in cases characterized by torpidity of the liver and an atonic condition of the stomach and bowels.

Where habitual constipation depends upon derangement of the intestinal glands, with consequent defective or perverted biliary and intestinal secretions, associated with an adynamic condition of the muscular and nervous forces of the alimentary canal—involving congestion of the portal circulation, and also of the gastro-intestinal mucous membrane—the action of cascara sagrada will be found most satisfactory, and he has repeatedly known it to succeed in relieving and regulating the bowels when all the other usual remedies had failed.

He has seen no reason to withhold its use in any case of habitual constipation of a functional character, even in those occurring amongst children; but it must be admitted that it acts differently in different individuals, some requiring more, and others less; in some, occasionally producing griping pains, while in most cases its action is quite painless. Symptoms of tenesmus can be readily obviated, however, either by limiting the dose or by combining some suitable antispasmodic with the active agent.

In the numerous cases in which chronic constipation is associated with hæmorrhoids, cascara sagrada is of especial service, as its efficient action as an aperient relieves the venous congestion; whilst, instead of irritating, as many cathartics do, it seems to exercise a soothing effect upon the rectal mucous membrane.

With regard to the dose and mode of administration, the physician should exercise some discretionary power in suiting the remedy to the morbid condition, and in combining it with such other remedies or adjuvants as may seem desirable. In our opinion small doses, frequently repeated, will be found more satisfactory than large doses; and this is what we might naturally expect from the physiological action of the drug. When chronic constipation is complicated with flatulent dyspepsia, deficient gastro-intestinal secretion, and impaired muscular tonicity of the bowel, ten to fifteen drops three or four times a day, either before, with, or immediately after meals, will be found to give the most gratifying results. Two to five drops may be given twice or thrice daily to children of a month old. Except in one case, in which an overdose had been taken without medical sanction, I have never known cascara sagrada to produce any undue local or systemic disturbance, such as nausea, tormina, impaired appetite, or eructations; and, in fact, I know of no therapeutic agent which is altogether so reliable and satisfactory in the numerous class of cases to which I have alluded.

Ten or fifteen drops should be taken regularly twice or thrice daily for a week, after which time, if no material improvement has been effected, the dose may be increased until the bowels have been freely relieved, when it may be gradually decreased in amount and frequency until healthy intestinal secretions and increased peristaltic action have restored the alimentary canal to its normal condition. Lactopeptin, dilute hydrochloric and nitric acids, tincture of nux vomica, liquor strychniæ, glycerine, extract of malt, aromatic syrups, etc., may often be advantageously combined with the cascara sagrada, according to circumstances.—*British Medical Journal*, July 14, 1883.

EXPERIMENTAL INHALATION-TUBERCULOSIS.—DR. A. WEICHSELBAUM, after a number of experiments on this subject, thinks that the results obtained by previous experimenters are partially correct, and draws the following conclusions: 1. The inhalation of tuberculous sputum produces in dogs a true miliary tuberculosis of the lungs and frequently of other organs (bronchial glands, kidneys, etc.), but which seems to have no progressive character. 2. The inhalation of other organized though non-tuberculous substances may produce nodules in the lungs, which may, it is true, have the external signs of tubercles, but which cannot be positively identified as tubercles. In view of these results, he recommends as a precautionary hygienic measure, that the rooms in which phthisical patients are confined should be regularly and periodically ventilated and disinfected, and that the sputa should always be disinfected and removed.—*Medizinische Jahrbücher*, 1883, Hft. ii.

CYSTS OF THE URACHUS.—DR. J. B. WUTZ has recently contributed an elaborate paper on the urachus and cysts of the urachus, in *Virchow's Archiv*, Bd. xcii. Heft 3. The paper is based upon reported cases, personal examination, and study of the literature of the subject. With regard to the urachus itself, after seventy-four post-mortem examinations, Wutz draws the following conclusions: 1. A probe can be passed from the bladder into the lower part of the epithelial canal of the middle ligament of the bladder. 2. Probing is rendered difficult at the entrance of the urachus by a small cross-fold, which also prevents the penetration of fluids during life. 3. The diameter of the epithelial canal diminishes at the upper end, as does the muscular layer. 4. A muscular layer is always present above the epithelial tube. 5. The beginning of the tendinous character of the middle ligament of the bladder corresponds, as a rule, in children to one-half, and in adults to one-third the distance from the umbilicus to the vertex of the bladder. 6. In extra-uterine life there is a growth both of the muscular layer and of the epithelial canal.

He then considers both small and large urachal cysts and draws the following conclusions: 1. All observed cysts are situated in the lower third or fourth of the distance from the umbilicus to the summit of the bladder, and arise from the normally persistent portion of the urachal canal. 2. The majority of the cysts contain strata of pavement epithelium; some contain only a single stratum. 3. All the cysts have a covering, more or less developed, of smooth muscular fibres. 4. Their size varies from that of a microscopic object to that of a bean. 5. Concretions seldom appear in the urachal canal or in the cysts; those observed by him were composed of carbonate of lime contained in an organic substance. 6. Cysts of the urachus may become the seat of an inflammatory process.

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SATURDAY, AUGUST 11, 1883.

YELLOW FEVER.

THE efficacy of a systematic effort to keep yellow fever out of the United States by a combination of the resources of the General Government with those of individual States is now being tested, and the results will be observed with interest, not only by physicians and sanitarians, but by all who are affected directly or indirectly by quarantine regulations. As matters now stand, however, at New Orleans, it is not quarantine which is being tested, but non-intercourse, which is a very different thing. By request of the State Board of Health, the Governor of Louisiana, in a proclamation dated July 24th, orders and directs that all vessels from Vera Cruz, Rio de Janeiro, Havana, and such other ports as may become infected with yellow fever, be prohibited from entering the waters of the State of Louisiana.

Evidently the Louisiana State Board of Health are unwilling to rely on their quarantine system, and are returning to mediæval methods. Nothing is said in this resolution, or in the proclamation of the Governor, as to where the infected vessels at the New Orleans Quarantine Station are to go, but it certainly could not be intended to merely drive them to sea without making any provision for the care of the sick or furnishing hands sufficient to navigate the ship, and it is probable that the proclamation has been issued with a tacit understanding on the part of all concerned that the infected ships are to go to Ship Island for treatment. It will no doubt be remembered by our readers that the previous opposition to that institution was mainly personal to the National Board, or to its New Orleans representatives.

Mean time, yellow fever has increased as usual in Cuban ports with the approach of warm weather, and in June it broke out with more than usual severity at Vera Cruz. Several ships from the latter place having yellow fever on board have arrived at Gulf ports, and have been sent to Ship Island, where four or five are under treatment at the present time. One infected steamer from Vera Cruz entered Chesapeake Bay, and another vessel having cases of yellow fever on board is at the quarantine station of Philadelphia. At the time of writing this, it is not known that any case of the disease has occurred this year in the United States, except at quarantine stations, and the season is now so far advanced that the danger of any extended epidemic this year is comparatively small. Nevertheless, Yellow Jack is trying our doors and peeping in at our windows in a fashion which causes very uncomfortable sensations in the minds of many persons in the Southwest who have had personal experience of the results when he once obtains a foothold in a city in warm weather, and it will be the middle of September before all apprehension on this account will have passed away.

While there are still great differences of opinion as to the contagiousness of yellow fever, the means by which it spreads, its period of incubation, and the possibilities of so treating a vessel infected by it that such vessel may, after a short delay, be safely allowed to come into port, the weight of evidence is in favor of the system of inspection, isolation, and disinfection recommended by the National Board of Health, which is essentially that of the New York Quarantine Station. This rests on the belief that, while yellow fever is very rarely conveyed by persons, it may be so conveyed under certain exceptional conditions not yet understood; that its period of incubation is, in almost all cases, less than ten days; that a ship which is infected with the poison may be, by thorough cleansing and disinfection, rendered harmless with so great a degree of probability that she may be allowed to reenter the channels of commerce, and that, when so disinfected, the sooner she is allowed to receive cargo and proceed to sea, the better, because if any germs survive the cleansing process, every day's delay increases the development of the poison.

The fact that the progress of a yellow fever epidemic is limited by season makes quarantine precautions against it much more important and valuable than they are against those diseases not so limited, such as smallpox or cholera, for even if the disease finally breaks through the barrier, yet, as it increases in geometrical progression, every week's delay in its entrance which can be secured, is equivalent to cutting off a week from the epidemic when at its height.

We have no information as to whether any use is being made of the Sapelo Sound refuge station on the Georgia coast, but a United States quarantine has been established by the Treasury Department at the mouth of Chesapeake Bay: and Ship Island, lying a few miles off the coast of Mississippi, and belonging to the United States, was selected by the National Board of Health, and fitted up as a refuge station to which infected ships could be sent from any of the Gulf ports for treatment.

So long as Ship Island remained under the control of the National Board, the Louisiana authorities were bitterly opposed to its use, declaring that the New Orleans quarantine station, located on the Mississippi River about sixty miles below the city, was in all respects preferable to Ship Island as a place for treating infected or suspected vessels, and utterly refusing to either send vessels to Ship Island or to admit vessels which had been at Ship Island, until they had gone through the same quarantine formalities at the New Orleans station as if they had just come from Havana.

But on the first of July last, Ship Island with all its equipment, including hospital, storehouse, building for those not sick, disinfecting-house, and a small steam yacht, was turned over to the Marine-Hospital Service, to which the Secretary of the Treasury had decided to confide the charge of the epidemic prevention fund appropriated by Congress.

The Louisiana Board appears to be on very friendly terms with the Marine-Hospital Service, and quite willing to coöperate with it, and hence, perhaps the non-intercourse proclamation above referred to may be considered as a round-about way to obtain the benefits of the Ship Island station without directly acknowledging that the means provided by the National Board at that point are being utilized. An inspection service is being maintained on the Mississippi River under the direction of the Sanitary Council of the Mississippi Valley, but if New Orleans is going to maintain non-intercourse, this inspection seems hardly necessary, so far as yellow fever is concerned, although it is no doubt useful, as tending to secure a greater degree of cleanliness on board the boats than would otherwise be obtained.

Upon the whole there is a fair prospect that we shall escape a yellow fever epidemic this year, and shall gain some experience which will influence Congressional legislation upon national health matters of which there is urgent need, and which will be attempted next winter.

THE REMOVAL OF NEOPLASMS OF THE BLADDER.

In two communications, made during the current year to the Royal Medical and Chirurgical Society, Sir Henry Thompson recalls attention to a class of cases which long experience has demonstrated almost invariably prove fatal unless subjected to surgical interference. Eliminating two operations for villous carcinoma, which, for obvious reasons, should not be tampered with, but of which one was removed and recurred, and one died, Sir Henry's ten cases show six recoveries and four deaths. Of the former, two were permanent after the first operation, two were permanent after a second, recurrence ensued in one case, and in one the growth could not be entirely removed. Eight of the operations were practised on males, with five recoveries and three deaths; two were performed on females, with one recovery and one death. These results, indicating, as they do, forty per cent. of cures, are highly gratifying, and clearly warrant the repetition of the operation.

Up to the present date, at least fifty-one operations have been practised for the removal of vesical tumors, of which thirty-three recovered, and only eighteen, or 35.29 per cent., died. Of the entire number, twenty-five were performed on males, with sixteen recoveries and nine deaths, and twenty-six on females, with seventeen recoveries and nine deaths. In twenty-two of the former the neoplasm was removed by perineal cystotomy, with seven deaths, or a mortality of 31.81 per cent; while epicystotomy was attended with two deaths in the three cases in which that procedure was resorted to. In twenty of the cases occurring in females, riddance was effected after previous dilatation of the urethra, with the result of fourteen recoveries and six deaths, or a mortality of 30 per cent., and in six the urethra or vesico-vaginal septum was incised, of which three, or 50 per cent., died.

In the male, Sir Henry Thompson opens the membranous urethra through a limited incision of the perineum, and dilates the prostatic urethra and neck of the bladder with the index finger. In the female, the urethra is rapidly dilated with the finger; while in either sex the tumor is removed with forceps of various sizes and curves. Against these exclusive modes of operating we must enter a most decided protest. The essential portion of the procedure in either sex is dilatation of the urethra and neck of the bladder, so that the opening must, of necessity, when the tumor is large and firm, be insufficient to permit of extraction, while the risk of lacerating the bladder is greatly enhanced—an accident which happened to Sir Henry and Von Langenbeck in attempts to tear away the tumor with the forceps. Excepting in the case of pedunculated growths, the forceps are almost worthless from the impossibility of getting rid of the entire mass, a consummation which Sir Henry does not, however, consider necessary, as he states that "cicatrization often leads to contraction and consolidation of the remainder;" a theory that is disproved by his having been obliged to operate a second time on two of his cases, not on account of recurrence, but simply from the fact that the first operation was not thorough.

The so-called papillomata, which constituted the majority of his cases, are in reality papillary or villous fibromata, the villi containing fibrous tissue continuous with that of the mucous or submucous connective tissue. To remove such a growth effectually, it will not suffice to crush and tear away the tufts, the base of the tumor must be attacked, and we know of no instrument so well adapted to the purpose as the sharp spoon or a sharpened lithotomy scoop. With the former of these contrivances, Simon, of Heidelberg, and others have safely and successfully attacked these growths, even when they filled nearly two-thirds of the female bladder. In multiple polypoid fibromata the scissors are far less dangerous than the forceps; and it is interesting to note that they were first employed by Cross, of Norwich, after a preliminary perineal cystotomy, nearly fifty years ago.

In conclusion, we may be permitted to express our conviction that, in the male, large sarcomatous, fibromatous, and myxomatous growths should be reached from above the pubes, while smaller growths should be removed with the forceps, spoon, or serre-nœud, after a median or lateral perineal cystotomy, the operation selected depending upon the size and configuration of the neoplasm. In the female, on the other hand, papillary tumors should be scraped away with the sharp spoon through the dilated urethra, epicystotomy or colpocystotomy being reserved for large and solid growths, the latter operation being the preferable one, as the interior of the bladder can be inverted through the wound, whereby the removal of the mass is rendered a comparatively simple procedure.

"THE ALIPTIC ART." IS IT A LOST ART?

The ingenious paper presented in another column, on "the aliptic art," can hardly be regarded as heralding a revival of an extinct process. The historical facts which Dr. Peterson has collected show a continuous succession in the published records reaching down to our own day. The expedient is novel only to those who have for the first time become acquainted with its actuality.

There is a clear, a most necessary distinction between oil inunctions and massage. The use of oil is a mere refinement in the application of massage, and when oil inunctions are required, massage does not form a necessary part of it, may often, indeed, be inadmissible. In some cases the two methods are conjoined.

From the merely therapeutical point of view oil inunctions serve two distinct purposes—to affect the condition of the skin itself; to modify the functions in general. Oil inunctions in febrile diseases, scarlet fever, for example, have a distinct effect on fever heat, reducing it sensibly. We need at the present time some exact observations showing the degree and duration of this influence. Oil inunctions are much employed now to improve the nutrition of the body in general. That this result follows is an undoubted fact. The oil disappears in the course of the frictions, the body gains in weight, and oil globules are found in the feces when there was no other source for their appearance there.

Massage, as now understood, is a part of that method of systematized movements commonly known as the Swedish movement cure. This consists in rubbing, kneading, and exercise of individual muscles and muscular groups, and movements of joints. In its present form, massage is a comparatively modern art.

Dr. Peterson, we fear, is much too sanguine in supposing that the "aliptic art" will be so far utilized as to make the skin the medium for the introduction of medicaments into the system to any large extent. The epidermis offers too substantial an obstacle to be overcome readily, unless by persevering friction, and its removal is a painful process. Notwithstanding its undeniable efficacy, the inunction treatment of syphilis has not been popular. Patients shrink from the labor required, and are afterward tormented by the sense of a filthy skin. Few adults are willing to undergo the application of oil inunctions, when suffering from wasting disease, in which they are highly beneficial, and children usually rebel energetically unless too ill to remonstrate. There are other more facile and efficient methods of introducing medicines into the circulation, so that the aliptic method will rather decline than advance in professional esteem. Such is our conviction. The expression of this, however, does not interfere with the instruction and entertainment afforded by a perusal of our contributor's excellent paper.

REFLEX NASAL COUGH.

In the American Journal of the American Sciences for July, Dr. John N. Mackenzie, of Baltimore, Md., has called attention to a cause of reflex cough, the frequency of which, according to his observations, makes it a matter of no small importance, and demands for it, therefore, general notice.

Dr. Mackenzie's attention was first directed to the study of "nose cough" by the fact that during the application of instruments, probes, etc., to the nasal mucous membrane, paroxysms of coughing were often excited which continued until the instrument was removed. The cough varied in character from a succession of short expiratory acts to convulsive paroxysms which interfered greatly with instrumentation.

Dr. Mackenzie then instituted experiments upon patients, upon friends, and upon himself, in the course of which he ascertained that the susceptibility was confined to the turbinated body, and particularly to the posterior end of the inferior turbinated bone, and the portion of the septum immediately opposite. This being the area occupied by the erectile tissue of the nose, he naturally concluded that this structure was connected in some way with the production of the reflex operation, and associated with its physiological function, whatever that may be. Of course, various degrees of susceptibility were observed. They have their parallel in the reflex asthma from polypi and chronic nasal catarrh.

Thence Dr. Mackenzie passed to clinical observation, and he reports not less than seven cases of cough associated with morbid states of this area and otherwise inexplicable, which responded promptly to operative and other topical treatment. All were cases involving decided hyperæmia of the mucous membrane of the area referred to, with or without coincident hypertrophic thickening. Doubtless, many men of large experience will recall cases of obscure cough, which may have been explained by the information contained in this article.

Dr. Mackenzie says these facts are the result of personal experience, and, as they represent the result of solitary observation are, of course, open to correction. Doubtless they will soon receive the test they will be required to bear, because the number of capable workers in this department is now so large that in almost every city two or three observers will be submitting them to test.

THE JOHNS HOPKINS SCHOOL.

DR. JOHN S. BILLINGS has declined the offer of the Professorship of Hygiene in the Johns Hopkins University, for the reason that it is impossible for him to hold this place while he is an officer of the army, and he prefers to retain the latter position and continue his library and indexing work, for the present at all events. It is probable, however, that in the course of the coming winter he will give a course of lectures at the University on the subject of municipal hygiene.

The object of the University authorities in appointing Professors Remsen and Martin, and Dr. Billings, to Chairs in the Medical Department, is understood to be for the purpose of obtaining a nucleus for the organization of the Medical School, to which additions will soon be made, and to have the benefit of their conjoint advice as to the best course to pursue, rather than to have them commence at once systematic instruction in the branches to which they were assigned. The organization must be somewhat of a temporary character until the relations which are to exist between the Hospital and the Medical School are determined on, and the Hospital itself is ready for work or very nearly so. As Dr. Billings takes great interest in both the Hospital and the proposed Medical School, and is well acquainted with the condition and requirements of both institutions, it is certainly very advisable that his counsel should be obtained, and no doubt it will be obtained; in which case his declination is merely that of the formal title of professor, while he can still render the most important of the services which the University at present requires.

The profession will be very glad to know that Dr. Billings' connection with the army and the medical library of the Surgeon-General's office is not to be severed for the present, at least. The library will always remain his most enduring monument, and he ought certainly to finish the *Index Catalogue* before undertaking any other work which would interfere with it.

At the same time it must be admitted that the proper organization of the Medical Department of the Johns Hopkins University is a very important matter to the medical profession of this country, since it is likely to very considerably affect the future of medical education and medical science in the United States, and to this end the University should secure the best men for its work, but it seems to us that it ought to be, not only possible, but easy to effect some arrangement by which the University can have the benefit of Dr. Billings' experience and knowledge, and still not interfere with the work which he is doing for the medical profession of the whole world, by making its literature accessible and usable.

THE CHOLERA EPIDEMIC.

THE mortality reports from Egypt during the past week have been very incomplete, and daily returns from the principal cities are no longer forwarded. The number of deaths, although diminishing, is still large, but the disease is not so virulent as it was, and a greater proportion of cases recover. On August 2d, the total mortality from cholera to date was given in a dispatch from Alexandria as 11,000, but the London *Daily News* asserts that it amounts to 16,000.

The disease appears to have extended beyond the limits of the delta of the Nile. It has obtained a foothold in Alexandria, although, if the dispatches are to be relied upon, it is not making any headway there. It has appeared at Beyrout in Syria, and has extended into Central Egypt, where 103 deaths were reported in the Province of Beni-Souef on August 3d and 4th.

Whether the disease be true Asiatic cholera, or some "malignant local distemper," matters little to us, since it has spread beyond the unsanitary localities in which it first appeared, and has attacked Europeans in Cairo and Alexandria, while the British army can number its one hundred and ten victims up to the 6th inst. A disease which causes the death of over 500 persons a day in the city of Cairo, and appears to be gradually penetrating the adjacent country, is one to be equally dreaded with the cholera, and every precaution should be used to keep it at bay.

Apropos of the letter in a recent issue on the prophylactic treatment of diphtheria, suggested by Dr. Porcher some weeks since—namely, by tincture of the chloride of iron, chlorate of potassium, and quinine—an experience which has come to our knowledge may be mentioned. In a family under medical observation, two fatal cases of diphtheria had occurred. Of three children at the time unattacked, two took willingly a large number of sugar-coated quinine pills, of which a bottle happened to be in the house. A third child could not be induced to take any whatever. The latter soon took diphtheria, and died after a short illness. The remaining two escaped the disease.

REVIEWS.

Early Aid in Injuries and Accidents. By Dr. Friedrich Esmarch, Professor of Surgery at the University of Kiel, etc. Translated from the German by H. R. H. Princess Christian. Philadelphia: Henry C. Lea's Son & Co., 1883. 8vo., pp. viii. 117.

Professor Esmarch's book on emergencies is a new illustration of the fact that eminence in one domain is not always a guarantee of fitness for another. That, besides securing a wide circulation in Germany, it has been translated in England by H. R. H. Princess Christian, and reprinted in this country by one of its foremost publishing houses, is rather an evidence of a somewhat indiscriminating hunger for such a work than of its satisfying qualities. The greatest respect for its distinguished author cannot blind the critic to the fact that this production is unworthy of his reputation. It is marred by commonplace, inequality, vagueness, and even occasional error. It opens with an introductory lecture on anatomy and physiology, in which the reader is informed, on one page, "of the limbs; . . . of these there are two upper and two lower—the arms and the legs;" and fifteen or sixteen lines more in which absolutely no other information is conveyed than the *number of bones* in their different parts. On another page we are told that the system must get rid of "water and urea." This is followed by seven lines on the kidneys, which contain only a fair description of their usual shape, and a very uncertain one of their situation. In speaking of the circulation, the author informs us that if the movement of the heart is arrested, it "stands still, and death soon follows." On the other hand, he gives the shape, size, and number of the red corpuscles; while this whole section contains not a word about the situation of the principal arteries and veins. Turning to the lecture on "Injuries," we read that "contusions are injuries caused by falls or blows which have resulted in internal lacerations, particularly of the smallest blood-vessels." How many examiners in surgery in America would accept such a definition from a student? Or who would affirm in general terms that "in injuries to lungs you have blood-spitting?" As to treatment, patients with severe contusions, pale and faint, are to be sprinkled with cold water; the surgeon closes wounds "*either* [italics ours] by stitches or a bandage (*not* by means of sticking plaster; this, like most salves and plasters, belongs to the surgery of the middle ages)." (!) Think of a German policeman trying to close a wound with stitches! Think, too, of the horror of sticking plaster being capped with a horror of germs—for Esmarch is a Listerite of the most infantile faith, and instructs his hearer, *in emergencies*, be it observed, to use antiseptics.

In treating of hemorrhage, the author gives the situation of arteries in only three places—the upper part of the thigh, the upper arm, and the neck above the collar bone. "It is at these points," he adds, that a surgeon generally applies pressure (as with a tourniquet) when he wishes to stop hemorrhage." Is it captious to inquire whether German surgeons use tourniquets to the neck?

But, to unbend—of burns: "In general, women are more careless about fire than men. How often are the light clothes of ladies set on fire by the careless handling of lighted candles, lamps, etc." The author thinks it ought to be stopped. "But many, alas! remain silent, and go their own way, like the priest and the Levite, and excuse themselves by saying, 'what does it concern me? Let every one take care of himself!'" He advises ladies to have the light material of ball-dresses rendered incombustible, and pictures the scene of a burning thus: "Flames envelop [*sic*] the unhappy creature, scorch her arms and hands, her neck and face; her hair and cap blaze up." She ought to throw herself on the ground and roll about, he says; but as this is not customary with ladies whose hair and caps blaze up (in America most women get burned at the lower extremity), the bystanders should surround her with a rug or coat, throw her on the ground, and "*roll her about there till the flames are put out.*" But why this rolling about? Is there no more orderly and composed way to smother flames? But, it is to be feared that they are likely to be precipitate in Germany; for the author says, "should any one have fallen into a lime-kiln or soap-lye, he should be drawn out as quickly as possible." And Her Royal Highness lets this advice go without comment.

But we may not linger over all the unintentional humor of this book. Nevertheless, we cannot keep back from our readers the caution, that persons to be revived from freezing "should be carried carefully into a closed but cold room, and undressed with care, *for fear of breaking the stiffened limbs.*" Afterwards, they may be rubbed with cold cloths, cold sand, (!) or put into a cold bath; part of which seems rather rough therapeutics, while all of it is false in principle, as experience and experiment in Russia has fully shown.

With little space left, after so long a justification of our before-expressed opinion of this little book, we can only say, on the other side, that it contains many excellent suggestions and a number of instructive woodcuts. But, as a whole, it is very far from what the world has a right to expect of such a man as Professor Esmarch, as well as from what the world needs in a book on accidents.

SOCIETY PROCEEDINGS.

THE PATHOLOGICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Thursday Evening, June 14, 1883.

The President, James Tyson, M.D., in the Chair.

KIDNEY AND HEART FROM A CASE OF CHRONIC BRIGHT'S DISEASE; EXTREME URÆMIC DYSPNŒA; MARKED ŒDEMA; RELIEF TO BOTH BY ACUPUNCTURE; INCIPIENT NEURITIS.

Dr. J. H. Musser, in presenting the specimens, gave the following clinical history:

R. T., æt. 35, admitted to University Hospital July 17, 1878; single; a patcher of goods; frequently exposed to draughts while in profuse perspiration; used tobacco to excess; once or twice a year he would "spree;" at twenty-two he had a chancre (?); no secondary symptoms; three times he had gonorrhœa; always healthy prior to present illness; never had rheumatism.

The patient inherited a tendency to phthisis from both parents, and to rheumatism from his maternal grandmother.

The first of the present illness was observed two years ago by a sudden night attack of dyspnœa. The dyspnœa continued for nine weeks, worse at night, and preventing work in the daytime, œdema of the feet and frequent micturition accompanying the dyspnœa. He improved, to have a relapse in four weeks of a month's duration, followed again by temporary improvement and a third relapse. From the latter he never rallied, œdema, cough, dyspnœa, frequent micturition, and dyspeptic symptoms being constantly present. The cough was dry, and attended with subintestinal pain. The œdema was general. When admitted to the hospital, under the care of Prof. Pepper, his condition was as above mentioned. During the July, August, and September following, the asthmatic attacks continued. In October, they were relieved, but the anasarca became more pronounced.

It may not be out of place to say that the dyspnœa was very severe, and almost defied treatment. It presented the clinical characters of uræmic asthma, and was relieved only by inhalations of nitrite of amyl or by hypodermic injections of morphia. The anasarca was very great and was not relieved by diuretics, diaphoretics, or cathartics. In October, acupuncture was resorted to, with temporary relief to the lower extremities and scrotum, its good effect lasting five days only, but being so marked as to encourage one in its use. During the following three months the punctures were made about fifteen times, and after each operation about three pints of serum would drain away. In the latter part of December, erysipelatous inflammation developed about the punctures, and extended over them. During the progress of the inflammation, large bullæ would form, the bursting and continued free discharge of which caused an entire disappearance of the œdema of both legs. Relief was not only afforded by these operations to the œdema, but the attacks of asthma notably diminished in frequency and severity. On January 8, two weeks after the inflammation of the right leg developed, sloughing took place. The sloughing was confined to the calf of the leg, was deep, and was attended with free serous discharge from the ulcers. In a few days, a low typhoid state set in; he rapidly lost strength, and on the 7th of February died of exhaustion.

When these notes were taken (January 8), the remaining features of the case were as follows: He was emaciated and anæmic, and his skin was harsh and dry; his countenance anxious; appetite poor; flatulent dyspepsia marked; the bowels constipated; hemorrhoids; tympanitic abdomen; slightly enlarged liver; normal spleen. At the apices of the lungs, diminished expansion; flattening, impaired resonance, and increased fremitus at the left; moist, crackling, and subcrepitant râles heard throughout the lungs. Apex-beat of heart in sixth interspace one-fourth inch inside of nipple line; veins of right side of neck enlarged; cardiac impulse moderately strong; at apex a low-pitched systolic murmur; muscular element lessened; at base, pulmonary second accentuated. The width of the cardiac area of dulness was increased one-half inch to the left, and was not changed by full inspiration.

Urine contained albumen; amount varying, at times two-thirds then one-third. Hyaline and numerous granular casts.

Opthalmoscopic examination. Small disks. Myopia. O. D. disk dirty-gray, veins tortuous. No marked change in the color of the nerve—outlines misty and it slightly swollen. O. S. disk same, but more marked. No hemorrhage in either eye. Diagnosed incipient neuritis.

Autopsy, five hours after death. No rigor mortis; emaciated; commencing ecchymoses. Great fulness of the venous circulation.

Lungs: apices bound down by adhesions. Slight right hydrothorax. Base of left lung anteriorly and posteriorly adherent. At left apex three or four areas of catarrhal pneumonia.

Heart: weight twenty-one oz.; left ventricle wall hypertrophied; mitral valve insufficient, admitting almost three fingers; its cusps thickened; one leaflet of the aortic valve slightly diseased; left cavities increased in size. Aorta atheromatous, a large patch especially one-half inch from the valves.

Liver enlarged, hard, congested. Kidneys small, congested, capsules adherent, relation of cortical to medullary substance normal.

Microscopical examination. Kidneys showed decided interstitial nephritis with fatty degeneration of the tubular epithelium. Liver slightly cirrhotic and fatty. Muscular fibres of the heart slightly undergone fatty degeneration.

AORTIC VALVE DISEASE DUE TO THE COMBINED ACTION OF STRAIN AND RHEUMATISM—EXCESSIVE DILATED HYPERTROPHY.

Dr. J. H. Musser, in presenting the specimens, said that neither the habits, the hygienic surroundings, nor the social condition of Mr. C. K., from whom these specimens were removed, had any relation to the cause of his illness. As a laborer in a rolling mill his occupation might have had some predisposing influence on the localization of the diseases, he being exposed to extremes of heat and obliged to do heavy lifting. The family history did not disclose hereditary disease. Withal, in the past twenty years—at this noting he was aged forty-seven—he had had frequent attacks of inflammatory rheumatism, and in 1878, four years previous to this account he had an unusually severe attack, after which he recognized his present palpitation, and of indigestion characterized by pain and vomiting. These symptoms increased in frequency and severity, and were often attended by œdema of the legs. The last three years he was unable to work. Within the year he lost in flesh and strength, and had several attacks of pulmonary congestion.

His condition when in hospital, December, 1879, was as follows: Slightly emaciated; sallow complexion; anæmic appearance; continuance of suffering, dry skin; cold extremities; ankles œdematous; muscular weakness, tremor on exertion; marked prominence of lower part of chest and bulging of process; sternum pushed forward, lower half especially, giving pointed, pigeon appearance; impulse marked in normal cardiac area, and extending two inches to the left; epigastric pulsation; pulsation of veins of neck; apex-beat in sixth interspace one inch outside of nipple line; no hepatic pulsation. A line drawn diagonally from the second right costo-sternal articulation to the fourth rib, one inch from right nipple line, and then vertically to the hepatic dulness, represents the right border of cardiac dulness. From the top of the third left rib, one inch from the sternum, a uniformly curved line extending from the apex-beat, showed the left limit. By joining these lines with horizontal ones, the upper and lower borders are defined.

On auscultation at the aortic orifice a strong systolic murmur, transmitted to the vessels of the neck, and a rough diastotic murmur, transmitted to the base and along the sternum, are noted. At the xiphoid cartilage and at the apex systolic murmurs, differing in pitch, are heard, the latter also at the spine of the left scapula. Pulse small, feeble, compressible, not 60.

Cough, muco-purulent expectoration are complained of, and the physical signs of bronchial congestion are observed. The appetite is poor, pyrosis and flatulence distressing, bowels constipated, urine slightly albuminous, no casts.

A subsequent course with calomel and soda and a liquid diet at first, followed by digitalis and quinia, the venous stasies now disappeared and the cardiac symptoms ameliorated within a month. After exposure to cold, internal venous congestions and œdema now supervened, and in five days, January 20, 1879, he died of pulmonary congestion.

At the autopsy the lungs, liver, spleen, and kidneys were found characteristic of dilatation of the heart—congested and with increase of connective tissue in the latter three organs. The heart presented very interesting lesions. It was enormously enlarged, weighing thirty-two ounces. The right heart was dilated; the ventricle wall averaged one-eighth of an inch in thickness; the tricuspid orifice was insufficient and admitted four fingers. The left ventricle wall averaged one-half inch in thickness; the mitral valves were slightly thickened, and a few opaque patches were seen. The aortic valves presented a remarkable appearance. Two of them were fused together and were rigid, projecting in the lumen of the orifice. The other valve also assisting in narrowing the calibre of the opening by rigidly jutting outwards. The lumen was scarcely more than a slit. The coronary arteries were not closed, and were found at the bottom of pouches with calcareous walls. On one side the deposited calcareous matter, of which the valves were composed, extended under the periendocardium to the base of one of the mitral leaflets. Of course the valves were covered by endothelium.

It is of interest to note that the mitral valves comparatively escaped the inflammatory storms, while the aortic valves were so markedly affected—contrary to the usual rule. It is suggested that a chronic valvulitis, or at least hyperæmia, might have been started by the strain incident to his occupation, and hence the valves readily invite acute inflammatory processes, the present case being a secondary degenerative result thereof.

CORRESPONDENCE.

LETTER FROM PRAGUE.

Climate—Food—Detachment of the Heart by a Crush, without External Wound—Sudden Death in Rheumatism—The University Examinations.

The last three weeks here the weather has been extremely warm, the thermometer running up sometimes as high as 33° or 34° C.; but, judging from what the papers say of the hot spell in New York, 34° C. would be considered rather pleasant there. We have the advantage here, however, of cool nights, no matter how hot it has been during the day.

One misses ice-water and our various cooling appliances very much; it is possible, with a good deal of trouble, to get a glass of water with a few pieces of dirty ice in it, but it always seems to excite so much surprise, alarm, and horror in the spectators that one has to seek out a secluded corner of the restaurant to drink it. I do not know which they regard as the worst, drinking ice-water or eating raw tomatoes. Now, I am very fond of the latter, and always eat them when I can; but from seeing a crowd around my part of the room every day, I begin to have some suspicion that the proprietor uses me as an advertisement, and that crowds come daily to see the great American tomato-eater. Ice-water especially seems to be regarded as a deadly poison, the cause of all the dyspepsia in America.

It is a fact that we do have more dyspepsia than the people here; but I think it is due rather to the quantity of food we take than to the nature of it. For many reasons, the quantity taken here is limited, the chief being that everything is so badly prepared that no living man could eat what we would call a respectable meal; then also the habit of paying separately for every individual thing one eats, even to the bread, is not conducive to a large appetite.

The ordinary midday meal here for the better classes is about as follows: First, a soup which has a whole legion of names, which are given to it according as to whether it contains sausage, potatoes, liver, or some other abomination, the body always remaining beef soup. This soup is on the whole not very bad. Next comes the inevitable "Rindfleisch," the boiled meat from which the soup has been made, a dark, dry-looking substance, easily chewed, but, as all the salts have gone over to the soup, having absolutely no taste, it is easily digested, and, though not palatable, is perhaps as nourishing as any other meat. Next comes the "Braten," and a glow of satisfaction comes over the face of the diner, for he has eaten his "Rindfleisch" to live, and now lives to eat his "Braten." This consists of baked or, more generally, fried veal or pork, and is served swimming in gravy and onions. A salad, made either of lettuce or cucumbers, which have been soaked in salt water several days to take all the colic out of them, is generally eaten with this. After this comes the dessert or "Mehlspeise," which may consist of anything in the world, provided we exclude all that is good. With this dinner a quart of beer or a pint of wine is generally drank.

You see by this that the most fertile source of dyspepsia, overloading the stomach, is practically excluded. Possibly another thing which helps to keep the eater braced up is that he eats everything with his knife, and in this way must take a not inconsiderable amount of iron into his system. True dyspepsia is a very uncomfortable and uninteresting disease, but, even if we were obliged to get dyspepsia from our manner of life, I do not know but that it is to be preferred to the German dinner. In some of the larger cities, where a higher degree of civilization has been reached, as in Vienna and Berlin, one can do better.

Strange to say, with the advent of the very hot weather, typhoid fever began to diminish, and now makes rather a small percentage of our post-mortems. In the past two weeks, we have had some rather interesting autopsies; one of these was a crushing injury, the man's thorax being caught antero-posteriorly between the bumpers of two cars as he was coupling them. Death was instantaneous. At the autopsy, no external injury was seen; several ribs on each side were broken, and the heart was found *free* in the abdominal cavity, it having been torn from its attachment to the great vessels and forced through a rent which was made in the diaphragm. It is rather difficult to understand how the violence could have acted so as to produce this result; most probably the man must have been stooping slightly forward when caught.

Another clinical case which came to autopsy a few days ago was also in many respects remarkable. The history of this was briefly as follows: A young man of twenty-two was brought into the hospital suffering from acute rhematism, high fever, swollen joints, etc. After a day or two symptoms of heart complication appeared, and the lesion here was referred by a clinician, one of the most careful and exact diagnosticians I ever saw, to the mitral valve. The patient improved under the usual alkaline treatment, and after being in bed two weeks made an effort to get up. He at once fell back in a state of semi-collapse, symptoms of acute peritonitis set in, and in two days he was dead. The diagnosis made was a most natural one; it was thought he had an inflammation of the mitral valve, and what was more natural than to suppose that an embolus coming from here had plugged up some large branch of the mesenteric artery. At the autopsy it was found that all the valves of the heart were free except those which enjoy almost an immunity from disease, the valves of the pulmonary aorta. Here one of the valves was ulcerated, a great rent was torn in it, and the blood had forced itself between the two lamellæ, giving rise to the so-called valvular aneurism. As was diagnosed, an acute purulent peritonitis was found, and the following condition of his intestines: The man had an abnormally long mesentery and S. Romanum. A large portion of the small intestine, about two-thirds of the ilium, was found twisted on its axis and twisted around the loop of the S. All circulation was cut off in both, and hence gangrene. This form of "Achsendrehung," in which a loop is formed which includes another portion of the intestine, is one of the rarest pathological conditions. Of course there was no connection between this and his acute rheumatism, and possibly none with his sudden collapse on rising.

Examinations are all over, and the University is practically closed for the summer, and the candidates have gone home happy or miserable, as the case may be. The examination given in pathological anatomy is not so difficult as I expected it to be, considering all the training the men have had. The candidate has to make an autopsy, and point out and explain all the principal changes; then he is given two specimens, usually easy ones, for microscopical diagnosis. This is the practical part, and in addition to this he is examined orally by the professor, some leading question being given him, on which he has to discourse for fifteen minutes. If a man fails in his practical examination he can have another chance after four months, if in his theoretical, after two months. The professor is rather lenient towards them; assuming 10 to be the highest a man can make, he is allowed to pass with 3 or 4, so that, in spite of the thoroughness of German teaching, a man can start on his medical career equipped with a very small stock of knowledge in the domain of pathology.

W. T. C.

PRAGUE, July 16, 1883.

A HEAD-SUPPORT FOR THE LARYNGOSCOPIC MIRROR.

To the Editor of THE MEDICAL NEWS.

SIR: In the number of your valuable journal for June 23d, I see that Dr. J. J. Chisolm, of Baltimore, describes under the head of "new inventions" an apparatus for securing the frontal mirror, which consists of a band running over the crest of the head, to one end of which the mirror is secured, whilst the other holds the instrument in place by compression of the occiput.

The device is an old one, and is familiar to those who pay special attention to diseases of the throat. In England, the occipito-frontal band is known as Johnson's, from Dr. George Johnson, of London, who claims to be its originator. The original apparatus has been variously modified, the most recent improvement being the jointed bar of Fox (optician), of Philadelphia, which was brought some time ago to this city and is in use in one of the special dispensaries. This method of securing the frontal mirror has, however, been almost universally discarded by specialists, and among them its inventor, in favor of the steadier and more portable silk head-band of Kramer, or the spectacle-frame of Semeleder.

The lenses behind the central aperture in the mirror used by specialists to remedy defective eyesight are objectionable in throat examinations, as they necessitate monocular vision. A much better plan would be to have appropriate glasses set in the spectacle-frame, after the manner used in the examination of the eye for errors of refraction.

Respectfully yours,
JOHN N. MACKENZIE, M.D.

BALTIMORE, July 29, 1883.

NEWS ITEMS.

NEW YORK.

(*From an Occasional Correspondent.*)

PROGRESS OF THE "NEW CODE."—In THE MEDICAL NEWS of July 14th, we gave some items showing the progress of the National Code movement. In the present, the doings of the "New Code" party will be briefly referred to. We have found it very difficult to obtain from the "New Code" men information other than that derived from the newspapers, in the way of editorial puffs of the "New Code," abuse of the National Code and its advocates, and sensational reports of "The Association for preventing the reënactment in the State of New York of the present Code of Ethics of the American Medical Association." This is the exact title of this association of medical men, who also style themselves the liberals, the progressives, and the gentlemen.

The following is extracted from the *New York Herald* of June 6th:

"The report of the liberals is a handsome quarto of ten pages." . . . "The total number of signers in the report is 1265, but it was understood several days ago that over one hundred more had subscribed, and the list has been increased since then. The total membership of the county medical societies is 3827, so that the liberals thus far have only captured a large one-third. They say that the old Code men have only obtained[1] *about six hundred* signatures up to date, and that the remainder are non-committal as yet." Only lately was it possible to secure a copy of the "handsome quarto" referred to in the *New York Herald* of June 6th A short analysis of its contents affords an insight into the way the "New Code" party canvass and count.

Their methods and their arithmetic are alike instructive and entertaining. Their committee work is done in formidable style. For instance, a committee of fifteen was appointed to draft a *declaration* of the views held by the opponents of the present Code of the American Medical Association. Then there was appointed or elected an advisory council of seventy-six members of the "Association for preventing the re-enactment, etc.," of the National Code, representing thirty-five counties. The meeting at which this "advisory council" was appointed, was held April 6, 1883, nearly four months ago. Great results were prophesied; and the whole State was to be forthwith carried by the promises of liberality, etc.

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[1] The italics are our own.

It is now time to ask what results have been attained by this active work of the last few months. Their very best showing gives for the city and entire State of New York a membership of 729, of which (after careful comparison of all published lists of both sides) forty-one are found to have declared themselves as upholding the National Code, and one has died. This leaves the "Association for preventing the reënactment" of the National Code with a membership of 687, against 2256 for the National Code as published June 21st. The city of New York alone gave for the National Code 742, 55 more than the entire vote of the "New Code" party in the city and State. The whole vote cast in the city and State of New York appears to be 2943, of which the National Code got 2256, a majority, over the "New Code" of 1569, or more than three-fourths of the entire vote.

CHOLERA MORTALITY.—The mortality returns from Egypt are very incomplete. Reports have been received as follows:

Total deaths from cholera in Egypt,	August 1,	887
" " " " "	" 3,	870
" " " " "	" 4,	748
" " " " "	" 5,	501
" " " " "	" 6,	598
Deaths from cholera in Cairo,	July 31,	275
" " " "	August 1,	273
" " " "	" 3,	170
" " " "	" 4,	160
" " " "	" 5,	11
" " " "	" 6,	78
Deaths from cholera in Alexandria,	July 31,	3
" " " "	August 1,	2
" " " "	" 2,	3
" " " "	" 3,	5
" " " "	" 4,	3
" " " "	" 5,	7
" " " "	" 6,	7

In Cairo the weather is intensely hot, and the average temperature under canvas is 106°.

110 British soldiers have died in Egypt from cholera since the outbreak of the disease.

Three cases have been reported at Beyrout, in Syria, and the Turkish Sanitary Council has decided to establish a cordon around the town, and to quarantine all vessels from there for twenty days.

MEDICAL AID FOR EGYPT.—The Indian government has determined to send to Egypt seven doctors and forty assistants. Twelve English doctors arrived at Alexandria on August 2d, and at once proceeded to Cairo.

SURGEON-GENERAL HUNTER has been appointed by the British Government to make investigations regarding the cholera now prevailing in Egypt. He has had extensive experience with cholera during his service in India, and from his special and professional knowledge he is said to be well qualified to conduct the inquiry for which he has been selected.

M. JULES ARONSSOLM, Professor of Organic Chemistry in Paris, has also been sent to Egypt to study the cholera epidemic.

THE ORIGIN OF THE CHOLERA.—A letter just received by the State Department from the Consul-General at Cairo, Egypt, dated July 5, 1883, states that cholera first made its appearance in lower Egypt on the 20th of June, or rather was first made public at that date; that the constituted medical authorities pronounce it to be the true Asiatic cholera, but are unable to say how it first reached Damietta, though it is generally ascribed to the deplorable sanitary condition of the province. There exists a bovine disease (epizootic) in that province, and many cattle dying were thrown in great numbers in the Nile and various canals leading from it; that the inhabitants drink this contaminated water, and subsist largely on the flesh of these diseased cattle. This, taken with the fact that the abundant fruit of the country is used in excess, leads the medical authorities to think that the disease could only be expected. Three other towns near Damietta, viz., Mansurah, Serbin, and Samanoud, were also suffering with cholera at the date of the Consul's letter. The daily death-rate at Damietta was 157.

The Consul concludes by saying that the Egyptian government is taking active measures to interrupt communication between places suffering from the disease by establishing sanitary cordons and prohibiting the public sale of fruits, fish, and unwholesome meat in the infected districts.

THE DISEASE AT DAMIETTA.—N. E. Stevens, United States Consul at Smyrna, writes to the National Board of Health, under date of July 13th, as follows: "The news from Egypt is less alarming than at the time of my last report. Facts have come to light tending to show that the disease which is decimating the population of Damietta is not Asiatic cholera, but a malignant local distemper caused by the filthy condition of the town and the unclean habits of its lower classes, whose principal article of food is fish, caught from water polluted and poisoned by being used as a receptacle for offal, the carcasses of diseased animals, etc. During the British occupation many animals perished, and their bodies were dumped into the water regardless of consequences.

"This theory is strengthened by the following facts: (1) The disease first made its appearance in Damietta on June 4th, but was not made public until June 20th, at which time the death-rate became too large for longer concealment. (2) The mortality is confined almost wholly to natives, who disregard in their mode of living all sanitary requirements. (3) The disease is limited to a small territory. (4) Its previous course, on the supposition that it is Asiatic cholera, cannot be traced. (5) The disease does not spread with the rapidity of Asiatic cholera. In 1865 the cholera was only two days in travelling from Damietta to Alexandria.

"I may add that some of the best physicians of Smyrna do not regard the present scourge in Egypt as the cholera. With the stringent measures taken to confine it within its present limits, it is fair to assume that its ravages will not be much further extended, although the death-rates show little diminution as yet."

PRECAUTIONS IN TURKEY.—The International Sanitary Council has imposed twenty-five days quarantine on vessels which have had cases of cholera on board. Other rigid restrictions will also be enforced.

CHOLERA PRECAUTIONS IN AUSTRIA.—The Imperial Board of Health of Lower Austria has issued a series of orders to the health officers of the different Cantons, from which we abstract the following:

1. All sanitaries, cesspools, dungheaps, stables, and other places favorable for the development of disease

germs, and likely to prove nuisances, must be removed, or cleaned and kept in order.

2. On the approach of danger all such places must be disinfected by solutions of sulphate of iron and carbolic acid, at least twice a week.

3. Houses in which cases of cholera or suspicious diseases occur must be disinfected daily.

4. In all buildings in which there are a large number of people, and in houses to which people come and go from different places, as manufactories, police stations, hospitals, railway stations, steamer landings, hotels, restaurants, schools, theatres, etc., must be daily disinfected and subjected to free ventilation.

5. All waters in which suspected patients or persons have washed must be disinfected; and all clothing must be immediately plunged into boiling water or subjected to steam impregnated with 1–50 of carbolic acid; floors and furniture to be cleaned with boiling water containing 1–30 of carbolic acid.

6. In cantons in which an outbreak of cholera occurs all public places are to be closed, and all public meetings are forbidden.

7. All overcrowded rooms, whether used for dwelling or working purposes, are to be partially emptied and ventilated.

8. All suspicious wells and other places from which water is obtained must be closed.

Cholera Hospitals.—Cholera stricken persons, who cannot be properly treated in their own homes shall be carried to a cholera hospital. Proper means for thorough ventilation and disinfectation must be provided and carried out in these hospitals. People dead of cholera shall be buried as quickly as possible in open coffins.—*Medicin.-Chir. Centralbl.*, July 20, 1883.

British Precautions.—The British Government has introduced a bill to centralize hospital management in the event of an outbreak of cholera in London, and it passed first reading in the House of Commons on August 2d.

Sir Charles Dilke, president of the Local Government Board, in presenting the bill, said that the general health of the country was very satisfactory, although there was a large mortality among children in London from diarrhœa. Unusual precaution, he said, would be necessary to guard against cholera until the expiration of six weeks, when, it is believed, the danger will have passed.

Orders have been issued thoroughly to disinfect cargoes of rags arriving at British ports from Egypt.

Precautions in the United States.—The Surgeon General of the Marine-Hospital has received advices that a vessel loaded with rags from Egypt is due at Portland, Me., in a few days. The Acting Secretary of the Treasury has telegraphed the Collector of Customs at Portland not to allow the cargo to be discharged until the local health authorities have inspected it.

Information has been received at Philadelphia that a large cargo of skins and hair had been sent from Cairo and Alexandria on July 9.

Dangerous Wool from Egypt.—The Secretary of the Treasury has received a letter from a prominent firm in New York City, calling attention "to the fact that large quantities of wool of large grade are exported from Egypt, Syria, and countries in their vicinity to this country, which is the principal market for them, besides considerable quantities of 'bed-wools' (extracted from old mattresses) from Constantinople, etc. These wools are frequently transshipped at Marseilles and in England for this country. In view of the terrible epidemic now raging in the Eastern Mediterranean, these wools might convey infection, as well as rags."

Quarantine of Egyptian Rags.—A letter was received by Surgeon-General Hamilton, from the treasurer of the Seymour Paper Company, asking the question: "What is the limit of time when it will be safe to move the (Egyptian) rags to market? He adds that "5000 to 6000 tons of rags are exported annually from Egypt, and nearly all come to the United States. Of course, these rags must be put under the ban, because a small portion, perhaps one ton, is infected. If there is no outlet, they will be saved until the markets are open." Surgeon-General Hamilton suggested that the rags be first dumped into a chlorine vat, at Alexandria, then taken out, dried, and baled, as it would be utterly impossible to fix a time when it would be safe, if ever, to ship rags gathered during an epidemic of cholera.

No more Statistics from Egypt.—The Registrar of the Bureau of Vital Statistics in New York has received an official letter from Amici Bey, Chief of the Sanitary Bureau of Cairo, Egypt, in which he was informed that hereafter no sanitary statistics will be interchanged between that cholera-plagued land and this city. The letter is dated June 21, or some time before cholera had appeared in Cairo. One of the most important duties of the Bureau of Vital Statistics is the compilation of comparative death-records, by which the standing of New York is ascertained among the large cities of the earth. This is done by an exchange of death statistics with other large cities, including Cairo.

The Bey's letter, which is written in French, says that the cessation of all future exchanges is due to the action of the British Government in abolishing the statistical department of the Egyptian sanitary service as a "measure of economy."

Yellow Fever.—The reported escape of two men from the quarantine station at Ship Island last week, has been officially denied by Passed Assistant John Godfrey, U. S. M. H. S., who states the men were not from Ship Island but from Cat Island, and had not been in quarantine. As the crews of all vessels in the various government quaranties and all the employés about the stations are mustered twice daily, desertions would be quickly detected.

The Consul at Vera Cruz has telegraphed the departure of the steamship "City of Puebla" for New York, and the steamer "Statesman" for Brazos, Texas. The Quarantine Commissioner at New York and the Collector of Customs at Brownsville have been informed of the above.

A dispatch was received by the Surgeon-General on the 7th inst. from Dr. Geo. M. Hargis, Sanitary Inspector stationed at Havana, that the steamer "Amethyst" left four cases of yellow fever at that port, and sailed for Boston on the 4th inst.

Up to the present writing there have been no cases of yellow fever, except in quarantine, within the limits of the United States. The latest reports are all favorable to its exclusion from the country this season, and two weeks more of immunity from the disease will render it fairly safe to feel assured that no epidemic of yellow fever is likely to occur. The "danger points"—New Orleans, Pensacola, and the Capes—are very carefully guarded by trusted government officers; the Governor of Louisiana has ordered all infected vessels from the Mississippi Quarantine out of the river and down to the Government Refuge Station at Ship Island; the Pensacola Board of Health permits no infected vessel to remain at the local quarantine station of that port, also sending them to Ship Island; and the pilots at the entrance to Chesapeake Bay are required to convey all vessels from foreign ports to the Cape Charles Quarantine Station at Fisherman's Island, to be inspected before proceeding to their port of destination on the bay—all these precautionary measures, taken with the instructions given to the Sanitary Inspectors of the Marine-Hospital Service stationed at foreign ports to report by cable the departure of vessels from infected localities, whether yellow fever or cholera, would seem to be a sufficient guarantee that nothing has been left undone to prevent the entrance of epidemic disease into the country.

Yellow Fever at Havana.—Forty-nine deaths from yellow fever at Havana were reported last week.

Yellow Fever Quarantine.—The Surgeon-General of the Marine-Hospital Service has been informed that Governor Cameron, of Virginia, has instructed the Virginia pilots to bring infected vessels to anchor opposite the Marine Hospital Quarantine at Cape Charles.

The revenue cutter Forward while on a cruise outside Sand Island, off Mobile Bay, on August 3d, spoke the Norwegian bark Vasco de Gama, from Vera Cruz, with yellow fever on board. The sick were reported to be convalescing, and needing no assistance. The bark was prohibited from coming nearer than ten miles from Mobile bar, and a pilot was not allowed to go on board. The vessel was ordered to Ship Island, and set sail at once.

Sanitary Precautions in District of Columbia.—**Dr. Smith Townshend**, Health Officer of the District, has requested the commissioners to furnish him with $500 to expend in sanitary work about the outskirts of Washington, which are said to be in a deplorably neglected condition. The commissioners have not yet furnished the funds, but have promised him $300 for the purpose.

The Cattle Commission's Report on the Foot and Mouth Disease among American Cattle.—The Treasury Cattle Commission has made the following report to the Treasury Department in regard to the alleged existence of the foot and mouth disease among the cattle in this country:

Charges having been recently made in the British Parliament that cattle were being shipped from our ports infected with the "foot and mouth disease," and a majority of the House of Commons having voted for a resolution opposing the importation into Great Britain of cattle from any country in which said disease exists, we feel it our duty to state the facts of the case, so far as this country is concerned. After a most extended and almost exhaustive inquiry, your Commission have been able to find no trace of "foot and mouth disease," apart from herds just landed from Great Britain, and whole herds have been in every case segregated until the infection has entirely disappeared. The nature and scope of our inquiry may be deduced from our report for 1881. Beginning with the great rendezvous of cattle at Kansas City, Council Bluffs, and Omaha, we have made careful investigations along all the lines of cattle traffic as far as the Eastern seaboard. In this investigation we have included all the great stock-yards where cattle are detained for feeding, watering, sale, etc.; all the great feeding stables connected with distilleries, and starch-glucose, and other factories; all the city diaries where stock-yards exist, and where the herds are replenished from such stock-yards; and to a large extent the great dairymen districts into which cows are drawn from the above-named stock-yards and lines of travel.

Up to the present date we have made observations in the stock-yards at the seaboard, the terminal end of our cattle traffic, and that to which all infection must gravitate, but apart from the imported cases above referred to we have been unable to find a single case of the foot and mouth disease complained of. The significance of the entire absence of this disease along the whole line of our cattle traffic, and in the herds into which this traffic leads, can only be appreciated when considered in its relation to the nature of the disease and the unmistakable symptoms of which it is manifested. The following points are specially to be noted:

First. The foot and mouth disease is perhaps the most contagious malady known. It rarely enters a herd without striking down all the members of that herd simultaneously, or nearly so.

Second. The susceptibility to the disease is all but universal on the part of warm-blooded animals, but all cloven-footed animals are especially and about equally predisposed to it. It cannot be overlooked nor covered up, therefore, as can a disease which confines its ravages to a single genus; but sheep, goats, and swine coming within the range of the infection contract and manifest the disease as readily and in as marked a way as do cattle.

Third. The period of latency or incubation is remarkably short, the eruption of the malady often taking place in thirty-six hours, and rarely being delayed, even in cold weather, beyond six days after exposure to infection. There is, therefore, no opportunity for concealment, nor for the disposal of infected but still apparently sound animals, while a journey of four or six days from the West, with the attendant privations and febrile excitement, would infallibly determine the full eruption of the disease before the stock arrived at the Eastern seaboard, and this although the infection had only been received after shipment on the cars.

Fourth. The manifestation of the disease is not only so universal in the herd affected, but so prominent and unmistakable that it could not possibly be overlooked. No one could ignore for a moment the swollen digits, the lameness, and the blisters or ulcers between the hoofs—the heat, tenderness, swelling, and blisters or raw sores on the udder and teats, and the abundant frothing and slobbering at the mouth, the frequent loud smacking noise made with the tongue and palate, and the large rounded blisters or red angry sores on the mucous membrane of the mouth. These cannot escape the attention of the owners and attendants, and especially when a whole herd of ten, fifty, or one hundred are suffering simultaneously. Much less can they escape the instructed eye of the professional veterinarian.

It may be well to state that the invasion of foot and mouth disease that swept from Canada over Northern New York and New England in 1871 created something closely approaching a panic. The agricultural papers were full of the subject, State boards of agriculture convened and discussed the subject; a convention of delegates from different States met at Albany, N. Y., and it was the engrossing theme for every local farmers' club along the lines of infection. This invasion, imported into Montreal with two English cows, fortunately occurred in autumn, and the long seclusion of the herds during the ensuing winter virtually stamped it out, the infection not having extended beyond herds in inclosed pasturages or buildings. Most of our farmers are as ignorant of the disease to-day of they were in 1871, and any new invasion could not fail to produce a similar excitement and consternation. It should be added that our connection with the States as well as the United States brings us constant complaints of diseases supposed to be contagious, but we have not found any evidence of the actual existence of the foot and mouth disease at any point among our home herds.

We cannot pass unnoticed the two latest importations of the disease from England. Two years ago the steamship France, of the National Line, landed in New York a herd of Channel Island cattle, suffering from foot and mouth disease. These were quarantined by the State authorities and the infection stamped out. The France, however, after an attempted disinfection shipped a cargo of American beeves for the return voyage, and these on arrival in England were condemned as being infected with foot and mouth disease. This was undoubtedly contracted on board ship. The second case is that of the steamship Nessmore, which in March, 1883, landed in Baltimore a herd of Channel Island cattle suffering from foot and mouth disease. These again were secluded as soon as detected by the Pennsylvania authorities, and no evil consequences to our home herds can be traced. But the steamship Nessmore, after an attempted disinfection by the agents, shipped a cargo of American fat cattle, and these on arrival in England were found to be suffering from foot and mouth disease. This infection, unquestionably contracted on board ship, appears to have been the main, if not the sole, occasion of the recent questions and resolution in the British Parliament. That the infection was not derived from American herds, but from English, is beyond all dispute alike in this case and in that of the France, two years ago. The same is true of our extensive invasion in 1871, which was derived from two imported short-horn cows, and which was thoroughly extinguished without having gained any permanent foothold.

We do not deny that other cargoes of American cattle may have been found suffering from the disease in question on arrival in England, but this is amply accounted for by the occasional use for these cattle of herd ropes and other appliances that have been previously used for European cattle. But on this point we insist, with the greatest confidence, that there is no evidence whatever that our American herds are now suffering from foot and mouth disease, and that there is as strong evidence of its non existence as can well be produced on the negative side of a question.

Malaria in Italy.—According to the statistical returns of the Italian Minister of War, more than 40,000 soldiers annually fall victims to malaria in Italy. The cost to the government of maintaining hospitals for patients suffering with malaria is estimated at over $1,400,000. Malarial disease is stated to have increased in extent and virulence since the construction of railways was commenced.

Smallpox in New Orleans.—Smallpox still lingers in New Orleans. For the week ending July 29, the mortality from this disease was twenty-one, or fifteen per cent. of the total mortality.

Dartmouth Medical College.—After forty-seven years of service as Professor of Chemistry in the Dartmouth Medical College, Oliver Payson Hubbard, M.D., LL.D., has resigned his chair and been made Professor Emeritus. Prof. Edwin J. Bartlett, of Dartmouth College, will fill the vacancy during the present lecture term, which opened on August 1st.

A New Medical School in the West.—The Regents of the University of Colorado have recently established a medical department in which the higher standard of medical education will be maintained with a four years' course of nine months each. The school is open free of cost to all qualified persons of either sex and from all parts of the world. The University is located at Boulder, about thirty miles from Denver. All candidates for admission must present a degree in letters or science, or pass an equivalent preliminary examination.

Morphine Mistaken for Quinine.—A few days ago, a resident of Collaton County, S. C., administered to his wife and two children sulphate of morphine, supposing it to be sulphate of quinine. A short time afterward the two children died, and it is feared his wife will not recover.

The American Society of Microscopists held their annual meeting at Chicago, beginning last Tuesday and lasting four days. A large number of papers were read

The Tewksbury Almshouse.—The Massachusetts State Board of Health have appointed Dr. C. J. Fisher Superintendent of the State Almshouse at Tewksbury. A committee was also appointed to visit the almshouse weekly and report to the Board.

Pasteur's Pension.—The Chamber of Deputies passed a law, on July 13th, which gives M. Pasteur an annual life-pension of 25,000 francs, revertible to his wife and children after his death.

Cæsarean Hystero ovariotomy.—Dr. Franzolini has recently performed this operation at Udine. The child was safely delivered. The woman recovered without any serious symptoms.

French Association for the Advancement of Science.—The Administrative Council of this Assotion has decided to establish a Subsection of Hygiene and Public Health, at the meeting in Rouen, on August 16–23, 1883. This subsection is to be ultimately transformed into a section.

Prize Essay on the Experimental Method in Science.—The State Department is informed that the Royal Institute of Higher Studies, at Florence, has offered a prize of 5,000 francs to the person presenting the best essay in Latin or Italian on the experimental method in science. Intending competitors can obtain further particulars by making application to the Chancellor of the Section of Medicine and Surgery of the Institute.

Prof. C. Wedl.—Prof. Wedl has been appointed to the rectorship of the Vienna University for the year 1883–84.

Prof. Winkel.—On account of the removal of Prof. Winkel to Munich, Dr. Leopold will assume the directorship of the Maternity Hospital at Dresden.

New Spirometer.—M. G. Bellangé has recently constructed an apparatus for the measurement of the capacity of the chest, of air expired in a given time, and of the amount of exhaled gases. It consists of a mouth-piece, a spirometer, and a carbonimeter.

Gutter Forceps.—M. Tripier, of Lyon, recently exhibited to the *Société de Chirurgie*, a pair of forceps with open grooves, intended to facilitate the opening of drains and the establishment of counter-openings where necessary.

The Bufalini Prize.—Conforming to the last wishes of the late Prof. Bufalini, the Minister of Public Instruction in Italy has published the conditions of an international competition for the best essay on the *Application of the Experimental Methods to Science*. Manuscripts written in the Italian or Latin language will be received until October, 1884, by the Secretary of the Medical Faculty at Florence. The prize amounts to 5000 francs.

RIBERI PRIZE.—The Riberi prize of 20,000 lire has been awarded to DR. GIULIO BIZZOZERO for his essay on the *Physiopathology of the Blood.*

AMERICAN PUBLIC HEALTH ASSOCIATION.—The American Public Health Association will hold its Eleventh Annual Session at Detroit, Mich., commencing Tuesday, November 13, 1883, and ending Friday, November 16th.

The subjects which have been chosen for special consideration at that time are:

I. *Malaria.* Its etiology and the methods for its prevention in localities or in persons; its American history; its specific particles; its origin; the conditions of its pervasion; its laws of extension, etc.

II. *Foods.* Their adulteration; healthy or deleterious modes of preservation and the function of legislation in regard to them. Ascertained facts as to adulterations in this country. Facts as to canned goods, condensed milk, artificial butter and cheese, prepared meats, etc.

III. *Vital Statistics.* Methods and results; defects apparent. How far foreign modes of tabulation are to be followed. Systems of collection and classification. Race vitality and the care of population as indicated by statistics.

IV. *The Control and Removal of all Decomposable Material from Households.* The mechanical laws, constructions, and appliances relative thereto. The construction of all inside pipes and their connections, their traps and siphonage, flushing, ventilation. How they shall be connected with out-door receptacles, and yet be free from ill effect.

The Executive Committee by this outline desires to avoid general dissertations on these subjects, and to secure facts and opinions as to practical methods of dealing with the interest of public health. Reasons for the views entertained, the results of experience and the best judgment as to preventive and restrictive measures are especially sought.

Methods and systems of physical education, drill, etc., feasible in the school room, will be discussed. While papers of merit on other topics are by no means excluded, it is believed wise to concentrate the preparation of papers and discussion upon these topics.

The Special Committees on Compulsory Vaccination, the Management of Epidemics, and on Diseases of Animals, will, before the completion of their reports, be glad to receive communications from any who have facts or opinions bearing on these subjects.

Gentlemen who propose to present papers are respectfully requested to notify the Secretary by September 1st, and to give the titles of their proposed papers.

The Executive Committee feels warranted in saying that the meeting promises to be one eminently inviting and profitable, and urges the attendance and coöperation of physicians, engineers, architects, teachers, and all those interested in the advancement of public health and physical well-being.

The meeting will be held under the Presidency of Dr. Ezra M. Hunt, of Trenton, N. J.

THE MISSOURI STATE BOARD OF HEALTH was duly organized at Jefferson City, on July 13, by the election of Dr. E. H. Gregory, of St. Louis, as President, and Dr. J. D. Hearn, of Hannibal, as Secretary.

The Board determined to hold an annual meeting in the city of Jefferson on the second Tuesday in January in each year, and regular meetings on the second Tuesday in April, July, and October, at such places as the Board may determine.

According to the rules adopted, the examination of candidates and physicians under the act to regulate the practice of medicine and surgery shall be had at the meeting of the Board in January, April, July, and October, and at no other time, unless ordered by the Board by a vote of two-thirds of all the members.

At a meeting held at St. Louis, on August 1, the Board adopted the Illinois minimum requirement of medical colleges, as follows:

Minimum Requirements for a Medical College to be Held in Good Standing.

First.—Conditions of admission to lecture courses:

1. Creditable certificate of good moral standing.

2. Diplomas of graduation from a good literary and scientific college or high school, or, lacking this,

3. A thorough examination in the branches of a good English education, including mathematics, English composition, and elementary physics or natural philosophy. This provision will not be required before the close of the lecture session of 1883.

Second.—1. Anatomy. 2. Physiology. 3. Chemistry. 4. Materia medica and therapeutics. 5. Theory and practice of medicine. 6. Pathology. 7. Surgery. 8. Obstetrics and gynecology. 9. Hygiene. 10. Medical jurisprudence.

Third.—Length of graduating courses:

1. The time occupied in the regular course or sessions from which students are graduated shall not be less than five months or twenty weeks each.

2. Two full courses of lectures, not within one and the same year of time, shall be required for graduation with the degree of doctor of medicine.

Fourth.—Attendance and examination or quizzes:

1. Regular attendance during the entire lecture courses shall be required, allowance being made only for absences occasioned by the student's sickness, such absences not to exceed twenty per centum of the course.

2. Regular examinations or quizzes to be made by each lecturer or professor daily, or at least twice each week.

3. Final examinations on all branches to be conducted, when practicable, by other competent examiners than the professors in each branch.

Fifth.—Dissections, clinics, and hospital attendances:

1. Each student shall have dissected during two courses.

2. Attendance during at least two terms of clinical and hospital instruction shall be required.

Sixth.—Time of professional studies before graduation shall not be less than three full years, including the time spent with a preceptor, attendance upon lectures, or at clinics and hospital.

Seventh.—Instruction: The college must show that it has a sufficient and competent corps of instructors, and the necessary facilities for teaching, dissections, clinics, etc.

It was resolved that the Secretary of the Board be instructed to prepare a synopsis of the law regulating the practice of medicine and surgery, together with mode of procedure, rulings, interpretations, and decisions on the same on such of them as may be of general interest, and have printed a sufficient number for general distribution.

The Board resolved to coöperate with the Mississippi Valley Sanitary Council.

A circular will be issued by the Board to the effect that it is the opinion of the Attorney-General that all physicians who have not practised five years in this State prior to the passage of the Act and have diplomas shall bring or send them before the Board for examination. All physicians who have no diplomas and were not in practice in this State prior to the passage of the Act shall come before the Board for personal examination and certificate.

The following resolution was adopted:

Resolved, That for the purpose of expediting the business of the Board any one member of the Board can verify a diploma, and such verification accompanying the proper affidavits is sufficient to warrant the Secretary to issue a certificate, *i. e.*, physicians may present their diplomas to any member of the Board, and his verification, with affidavits, will be all that will be necessary for him to apply to the Secretary of the Board of Registration.

The Board issued one hundred and twenty-five certificates for the practice of medicine in the State. Five applicants presented themselves for examination, of whom four were rejected.

The proceedings of the Board are reported to have been quite harmonious, considering the composition of its members, composed as they are of regulars, eclectics, and homœopaths. The examination of applicants for a license has been rigid, as is indicated by the fact that four out of five were rejected, one of the latter being said to be a *protégé* of one of the members of the Board, who is classed as a homœopath.

Dr. Pollak and the Revision of the Code.—At a late meeting of the St. Louis Medical Society, Dr. Pollak, on a question of privilege, read a statement concerning the resolutions offered by him at the meeting of the American Medical Association, from which we make the following extracts:

On Saturday, June 2, 1883, I offered in this Society the following resolution:

Resolved, That the delegates of the St. Louis Medical Society to the meeting of the American Medical Association be requested—not instructed—to move for the appointment of a committee of one member from each State for the purpose of taking into consideration the propriety and advisability of a revision of the Code of Ethics of the American Medical Association, and to report thereon at the meeting of 1884.

This resolution was adopted unanimously. A motion was made and adopted that a preamble be added to the above. And another motion was also passed, that the Revising Committee, if one should be appointed, be authorized to prepare a code, which should be submitted to the American Medical Association in 1884.

In compliance with the resolutions of the St. Louis Society, I prepared a preamble the next day. I read it to Dr. Maughs and to Dr. Jackson, delegates from this city and State, whom I met on the train, for their opinion and frank criticism. Their approval was sufficient to me, and would be so to all unbiased men. They were also shown to the Permanent Secretary of the Association, Dr. Atkinson, and they received his entire assent. He also kindly consented to read them at the meeting. I then offered my preamble and resolutions. If dynamite had exploded in the hall, it could not have caused a greater buzz, stir, and confusion among the 1,500 or 2,000 persons present. A motion to table them was promptly made, and it prevailed by a very large majority. But this was expected, of course, but they were read and understood, and they will have to be put on record.

Up to that time I was utterly unknown, a stranger among strangers. But there was a good deal of handshaking after adjournment by and with hundreds I had not known before. In the nine evening receptions which came off on Thursday, I was met and saluted like an old friend as the champion of reform and of liberal ideas. On that very day, my preamble and resolutions were published *in extenso* in the Cleveland papers, and on the next day the medical and secular papers of the whole United States spread them before the public, suitably commented upon.

On the 9th inst., I made my report to this Society. Dr. Love took exception to it, saying that I had not consulted the St. Louis delegation, which perhaps would have been the proper thing to do; but it had not occurred to me then. I was not required to do it. Besides, we were so scattered in Cleveland that I never met two St. Louisians together at any time until Thursday evening. His main objection was that the preamble did not reflect the spirit of the St. Louis Medical Society, and on the whole they were in bad taste. I maintain that while I may have failed in form, I have certainly strictly obeyed the mandate of the St. Louis Medical Society.

The remainder of the statement was devoted to personal criticism. The Publication Committee declined to insert the paper in the Society's proceedings.

The Pennsylvania Anatomy Act.—By request, we give the text of this act in full, as a model of an efficient law on this subject. The act is entitled "An Act for the promotion of medical science by the distribution and use of unclaimed human bodies for scientific purposes, through a board created for that purpose, and to prevent unauthorized uses and traffic in human bodies."

Section 1. *Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania in General Assembly met, and it is hereby enacted by the authority of the same*, That the professors of anatomy, the professors of surgery, the demonstrators of anatomy, and the demonstrators of surgery of the medical and dental schools and colleges of this Commonwealth, which are now, or may hereafter become incorporated, together with one representative from each of the unincorporated schools of anatomy or practical surgery within this Commonwealth, in which there are, or, from time to time, at the time of the appointment of such representatives, shall be not less than five scholars, shall be and hereby are constituted a board for the distribution and delivery of dead human bodies hereinafter described, to and among such persons as under the provisions of this act are entitled thereto. The professor of anatomy in the University of Pennsylvania at Philadelphia, shall call a meeting of said board for organization at a time and place to be fixed by him, within thirty days after the passage of this act. The said board shall have full power to establish rules and regulations for its government, and to appoint and remove proper officers, and shall keep full and complete minutes of the transactions, and records shall also be kept under its direction of all bodies received and distributed by said board, and of the persons to whom the same may be distributed, which minutes and records shall be open at all times to the inspection of each member of said board, and of any district attorney of any county within this Commonwealth.

Section 2. All public officers, agents, and servants, and all officers, agents, and servants, of any and every county, city, township, borough, district, and other municipality, and of any and every almshouse, prison, morgue, hospital, or other public institution having charge or control over dead human bodies required to be buried at the public expense, are hereby required to notify the said board of distribution, or such person or persons as may from time to time be designated by said board, or its duly authorized officer or agent, whenever any such body or bodies come to his or their possession, charge, or control; and shall, without fee or reward, deliver such body or bodies, and permit and suffer the said board and its agents, and the physicians and surgeons, from time to time designated by them, who may comply with the provisions of this act, to take and remove all such bodies to be used within this State for the advancement of medical science; but no such notice need be given, nor shall any such body be delivered, if any person claiming to be and satisfying the authorities in charge of said body that he or she is of kindred, or is related by marriage to the deceased, shall claim the said body for burial, but it shall be surrendered for interment; nor shall the notice be given, or body delivered if such deceased person was a traveller who died suddenly, in which case the said body shall be buried.

SECTION 3. The said board or their duly authorized agent may take and receive such bodies so delivered as aforesaid, and shall, upon receiving them, distribute and deliver them to and among the schools, colleges, physicians, and surgeons aforesaid, in manner following: Those bodies needed for lectures and demonstrations by the said schools and colleges incorporated and unincorporated shall first be supplied, the remaining bodies shall then be distributed proportionately and equitably, preference being given to said schools and colleges; the number assigned to each to be based upon the number of students in each dissecting or operative surgery class, which number shall be reported to the board at such times as it may direct. Instead of receiving and delivering said bodies themselves, or through their agents or servants, the board of distribution may, from time to time, either directly or by their authorized officer or agent, designate physicians and surgeons who shall receive them, and the number which each shall receive. Provided always, however, That schools and colleges, incorporated and unincorporated, and physicians or surgeons of the county where the death of the person or such persons described takes place, shall be preferred to all others. And provided also, That for this purpose such dead body shall be held subject to their order in the county where the death occurs for a period not less than twenty-four hours.

SECTION 4. The said board may employ a carrier or carriers for the conveyance of said bodies, which shall be well enclosed within a suitable encasement, and carefully deposited free from public observation. Said carrier shall obtain receipts by name, or, if the person be unknown, by a description for each body delivered by him, and shall deposit said receipt with the secretary of the said board.

SECTION 5. No school, college, physician, or surgeon, shall be allowed or permitted to receive any such body or bodies until a bond shall have been given to the Commonwealth by such physician or surgeon, or by, or in behalf of such school or college, to be approved by the Prothonotary of the Court of Common Pleas in and for the county in which such physician or surgeon shall reside, or in which such school or college may be situate, and to be filed in the office of said Prothonotary, which bond shall be in the penal sum of one thousand dollars, conditioned that all such bodies which the said physician or surgeon, or the said school or college, shall receive thereafter, shall be used only for the promotion of medical science within this State; and whosoever shall sell or buy such body or bodies, or in any way traffic in the same, or shall transmit or convey, or cause to procure to be transmitted or conveyed, said body or bodies to any place outside of this State, shall be deemed guilty of a misdemeanor, and shall, on conviction, be liable to a fine not exceeding two hundred dollars, or be imprisoned for a term not exceeding one year.

SECTION 6. Neither the Commonwealth, nor any county or municipality, nor any officer, agent, or servant thereof, shall be at any expense by reason of the delivery or distribution of any such body, but all the expenses thereof, and of said board of distribution, shall be paid by those receiving the bodies, in such manner as may be specified by said board of distribution, or otherwise agreed upon.

SECTION 7. That any person having duties enjoined upon him by the provision of this act, who shall neglect, refuse, or omit to perform the same as hereby required shall, on conviction thereof, be liable to fine of not less than one hundred nor more than five hundred dollars for each offence.

SECTION 8. That all acts or parts of acts inconsistent with this act be and the same are hereby repealed.

DA COSTA'S DIAGNOSIS.—We learn that the first edition of the German translation of this justly popular work has been exhausted in less than nine months after its publication. That a translation of a foreign book should attain such remarkable popularity, within such a short space of time, is a high tribute to its merits.

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending July 28, 1883, indicate that cholera morbus, consumption, and dysentery have increased, that diarrhœa has considerably decreased, and that measles, pneumonia, and cerebro-spinal meningitis have decreased in area of prevalence.

Including reports by regular observers and by others, diphtheria was reported present during the week ending July 28, and since, at twelve places; scarlet fever at fourteen places; and measles at ten places.

OBITUARY RECORD.—DR. DUBROVO, editor of the *Annals* of the Moscow Chirurgical Society, has recently died of diphtheria, contracted from a patient upon whom he had performed tracheotomy.

NOTES AND QUERIES.

HYSTERO-EPILEPSY.

To the Editor of THE MEDICAL NEWS.

SIR: There is an article in your journal of July 28, 1883, by Dr. E. J. Kempf, of Ferdinand, Indiana, relating to a case of hystero-epilepsy in a boy.

As it is well known to the profession that many cases of hysteria and epilepsy are induced, both in the male and female, by habits of masturbation, might not this one proceed, in a measure, from the same cause? His habits and disposition, in my humble opinion, seem to favor such an idea.

I am yours obediently,

JOHN C. WHITE, L R.C P. Edin., etc.

NEW YORK, July 30, 1883.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JULY 30 TO AUGUST 6, 1883.

MAGRUDER, DAVID L., *Lieutenant-Colonel and Surgeon.*—The leave of absence extended one month.—*S. O. 89, Military Division of the Missouri, August* 4, 1883.

FORWOOD, WILLIAM H., *Major and Surgeon.*—To proceed to Fort Washakie, Wyoming, and Fort Ellis, Montana, on public business and return.—*S. O. 87., Military Division of the Missouri, August* 2, 1883.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. XLIII. SATURDAY, AUGUST 18, 1883. No. 7.

ORIGINAL LECTURES.

VESICO-VAGINAL AND RECTO-VAGINAL FISTULA.

A Clinical Lecture, delivered at the Jefferson Medical College Hospital.

BY J. EWING MEARS, M.D.,
GYNECOLOGIST TO THE HOSPITAL.

GENTLEMEN: You will remember the patient now before you as the one presented some three weeks since suffering from a vesico-vaginal fistula. At that time, I made an examination of the opening, and described to you its size and position, being as large as a quarter of a dollar piece, and situated high up near the mouth of the uterus. You will recall that I spoke of the tense and thickened condition of the vesico-vaginal wall, and stated that it was a condition due to the opening in the bladder which had existed for so long a period. I alluded to the methods of treatment by the denudation of the edges and the introduction of sutures employed in these cases, and called attention to the fact that, in many cases, repeated operations were required to secure entire closure of the fistulous opening.

Since the patient visited the clinic, I have operated upon her, and I am gratified in being able to report that I have succeeded in closing the opening at one operation. Many difficulties were encountered, however, in obtaining this favorable result, and of these I shall speak now. In the first place, the day chosen for the operation was very unfavorable, so far as the proper light was concerned—"cloudy with partially clearing weather," as the Signal Bureau would state it, this condition affording a very uncertain light—one moment dark, and another fairly light, with varying changes from one to the other; not only uncertain was the light, but it was decidedly annoying. So many difficulties did this bad light introduce that a friend who happened into the operating-room strongly advised me to abandon the attempt at closure at that time. The patient, however, was so anxious to have the operation performed, and as I had been compelled, for other reasons, to disappoint her on one or two occasions, I decided to persevere and complete it. Under ordinary circumstances, I should adhere to the very good rule of selecting, as a day for an operation of this character, one in which the light was the best, and I should delay the operation if such was not the case.

The high position of the opening presented some difficulties which were increased by the absence of a good light. You can readily understand how much more difficult the manipulations would be which are required in using instruments in an operation upon a point high up in a tube, like the vagina, than those necessary at the orifice. Moreover, the canal was much contracted, and, for this reason, the opening could not be readily exposed.

I have referred to the tense condition of the anterior vaginal wall the result of the permanent opening in the vesical wall. This condition prevented the approximation of the edges of the opening without undue tension. In order to overcome this I made "relaxing" incisions, as they may be termed, through the mucous membrane, and after breaking up the connecting vesico-vaginal fascia slid the membrane up and in this manner relieved the tension. I was careful in denuding the borders of the opening to secure an ample raw surface completely encircling it, so that the surfaces apposed after the introduction of the suture would be denuded. This is of the utmost importance in order to obtain complete union. Before introducing the sutures the edges should be brought together, and a careful examination made with regard to this point.

For the purpose of introducing the sutures I employed, as is my custom, a long-handled needle slightly curved with an eye in the point. This needle I introduced about the one-sixth of an inch outside of the margin of the denuded surface, passed it beneath the tissues through the edge of the opening, carried it across the opening into the opposite edge at a corresponding position, and in the same way brought it out at a point opposite to that of entrance. It is necessary to steady the tissues with a tenaculum, and a blunt-pointed hook will assist in the passage of the needle if placed behind its point as it emerges. The needle being held in position is armed with silver wire and withdrawn, in this manner depositing the suture without difficulty. This method of introducing the sutures in these operations I regard as possessing advantages over that of using the small vesico-vaginal needles. These needles, besides being difficult to introduce, are liable to break and thus complicate the operation. In the efforts made at introduction lacerations of the tissue also frequently occur. In this case four silver-wire sutures were introduced and clamped with perforated shot. The sutures were removed on the tenth day. A metal self-retaining catheter was kept in the bladder for a period of twelve days. On removal of the catheter the patient was able to empty the bladder, the urethra being used for that purpose the first time in thirty-seven years. At the end of the second week the patient was permitted to get out of bed, and the bowels were relieved by an enema.

The gratification which the patient expresses at the favorable result following the operation is quite manifest. She describes, in a graphic manner, the sufferings she has endured in the past thirty-seven years—"scalded in the summer" and "frozen in the winter" by the constant flow of urine. Each night she retired with a basket of dry cloths beside her bed, and during the night she was kept busy in removing the wet and readjusting the dry. Now, she passes water but four times in the twenty-four hours, and enjoys a relief from suffering, the extent of which she can scarcely appreciate.

I also present to-day three patients who have suffered with recto-labial and recto-vaginal fistulæ. These lesions are caused by prolonged pressure of the child's head in parturition, direct injury, as may occur in the use of the forceps during delivery, and ulceration or abscess. Prolonged pressure and direct injury by instruments are more liable to produce vesico-vaginal fistulæ, whilst ulceration is the most prolific cause of the recto-vaginal variety. Stricture of the rectum, due either to malignant or syphilitic disease, is very frequently the exciting cause of the ulceration, and should always be considered in connection with the adoption of any surgical procedures.

Inflammation occurring between the vagina and rectum, involving the recto-vaginal fascia, may eventuate in abscess, which may open into both cavities, or the pus may gravitate towards the perineum, and escape into the rectum, just behind the sphincter ani, and also burrow through one labium, forming a fistulous tract connecting the rectum and labium.

The symptoms presented in all of the varieties of these fistulæ are the escape of gas or fecal matter into the vagina, or through the fistulous tract into the labium. When the opening is large, the discomfort is very great, the patient having very imperfect or no control over the movement of the bowels. In simple cases, not associated with stricture or disease of the rectum, the methods of treatment are similar to those used in cases of anal fistulæ—cauterization by mineral acids and the actual cautery; nitrate of silver, either in solution or solid form, and tincture of iodine are recommended.

In larger openings between the rectum and vagina, closure may be effected by means of sutures, as in the vesico-vaginal variety, or when situated near the sphincter ani, this muscle, with the recto-vaginal wall, may be divided by the knife, or cut through with the ligature. In the case of recto-labial fistula now before us, I performed two operations—the first with only partial success. In the first operation, I employed a method described as that of the late Dr. John Rhea Barton, of this city, which consisted in the complete division of the sphincter ani laterally, and on the side of the labial opening, in this instance, as it usually happens, on the left side. The finger was introduced into the bowel, the curved bistoury carried along it and the muscle divided by cutting from within outwards. The principle of the operation you can understand, the object being to secure complete relaxation of the parts, thus permitting the walls of the fistulous tract to come in contact, and union to occur as a result. In this case, I had only partial success, owing, it may be, to a failure to divide all of the fibres of the sphincter; complete division is essential to success, and care should be taken to accomplish it. The second operation consisted in division of the wall of the fistula on the grooved director, as is practised in anal fistulæ, the parts healing by granulation.

In the two cases of recto-vaginal fistulæ, I closed one by suture after denuding the margins freely without dividing the sphincter ani. This opening was quite small, and the vaginal wall was so relaxed that no tension was exerted by the sphincter. In the other case, the opening was large enough to admit the end of the index finger, and was situated just behind the sphincter muscle. On division of the remaining portion of the perineum, it was found to contain a fistulous tract in which feces were lodged. The parts were freely cut away, so as to remove entirely the fistulous canal; the edges and borders of the opening denuded for some distance up into the vaginal tube, and the mucous membrane dissected from the inner surface of the labia, as is done in cases of perineorrhaphy, where the bowel is involved.

Silver-wire sutures, vaginal, superficial, and deep perineal—in all, fourteen—were used to approximate the parts. The quilled suture was used in bringing together the deeper surfaces of the perineum. Complete union followed in this case.

The superficial perineal sutures were removed on the sixth, the deep on the eighth, and the vaginal on the tenth day. The patient was kept on the back or side, with the limbs fastened together, for three weeks, and the bowels were opened by a large dose of oil, aided by enemata, on the nineteenth day.

In the treatment of these varieties of fistulæ, success depends in great measure, as in the vesico-vaginal forms, upon careful preliminary preparation, and, after operation, care. Where the opening is due to syphilitic disease, specific remedies should be given for some time preceding any surgical procedures.

ORIGINAL ARTICLES.

A REPORT OF A VERY LARGE SOLID FIBRO-CYSTOMA OF THE OVARY.

OPERATION FOR ITS REMOVAL; FATAL RESULT; WITH REMARKS.

BY WALTER IZARD, M.D.,
OF LYNCHBURG, VA.

My object in reporting the following case is not so much to show anything especially unique, either in the tumor or the operation, although the great size and peculiar structure of the former would entitle it to special interest, as to attract attention to the difficulty which exists in some conditions in making a correct diagnosis as to structure, before operating, without resorting to the expedient of aspiration or tapping as a diagnostic measure.

April 15, 1881.—M. C., colored, æt. 40 (about), called on me for the purpose of having a large abdominal tumor removed. In appearance she was decidedly larger than a woman at the full term of utero-gestation; general health fairly good, although she was losing flesh rapidly according to her own statement. She said the tumor had first began to attract her attention about three years previously, as a very slight enlargement in the right inguino-iliac region, that its growth had been very slow until the past ten months, since which time it had been rapid—nearly all of its present enormous size had been gained within that time; the tumor had never been painful until lately, when she had suffered much from the effects of its weight, having constant backache, sharp pains in thighs and abdomen, great irritability of the bladder, hemorrhoids, alternate diarrhœa and constipation, etc. The menstrual function was still active, regular and normal in quantity and duration. Of late she had suffered much from œdema of the lower extremities, locomotion had gotten to be difficult and laborious, and she was incapacitated by her size and sufferings from pursuing her daily avocation, upon which she was dependent for a living. She urgently requested its removal.

Physical Examination.—The abdomen, upon inspection was ovoid in shape; upon palpation the tumor appeared to fill the entire abdominal cavity, its fundus reaching to the ensiform cartilage and encroaching upon the diaphragm to the embarrassment of respiration; it communicated a highly elastic sensation to the touch; *fluctuation was distinct* and unmistakable; careful percussion and auscultation confirmed the above indications of its size and character. The uterus, upon examination, was *in situ* and healthy, the sound introduced showed the extent of its cavity to be three inches (she had borne children).

Dr. John W. Sale, of Liberty, Va., then my partner in the practice of medicine, was called in consultation and agreed with me in the diagnosis, which was cystic tumor of the right ovary. Thinking the case a favorable one and conceiving that nothing was to be gained by delay, I agreed to remove the tumor, and a day in the following week was fixed for the operation; in the mean time the patient was put upon the preparatory treatment usual in cases for ovariotomy, and all the arrangements as to cleanliness and general hygiene about the room to be occupied by the patient were strictly attended to. A second examination previous to the time set for the operation confirmed my opinion on all points.

April 25th, at 12 M., I proceeded to operate in the presence of and assisted by Dr. John W. Sale, Dr. E. W. Sale, Dr. J. C. Brown, and Dr. F. Sale, then a medical student. The usual incision about three inches in length was made between the umbilicus and pubis in the median line; upon opening the peritoneum a considerable quantity of straw-colored serum escaped and the tumor appeared in the incision red and fleshy in appearance and very firm and elastic in feel. The trocar plunged into it in two places obtained nothing but a few drops of venous blood; there was of course no diminution in its size; the incision was then prolonged upwards by the side of the umbilicus and the hand was introduced to examine its attachments; it was found to be free from adhesions anteriorly, but posteriorly it was closely adherent throughout the whole of its extent, the adhesions involved the sheath of the aorta, the common internal and external iliacs, the vertebral column, and the whole posterior aspect of the abdominal cavity; there were no adhesions to the bladder or uterus; it arose from a very stout, fleshy pedicle on the right side in the region of the ovary. The tumor was then with caution and great difficulty peeled off from all its attachments and turned out of its bed; this was accomplished without injury to any of the important vessels with which it was in relation. Two of the gentlemen assisting me then held it up, with difficulty, on account of its size and weight, while I transfixed the pedicle and tied it in two parts with a ligature prepared of twisted saddler's silk; the tumor was then cut off. The pedicle, which was very short, was about two inches in diameter, and was found to consist of a perfect mass of bloodvessels simply bound together by connective tissue of a fibrous character. The arteries varied in calibre from the size of the brachial artery to that of the most minute arteriole. Owing to the dense and unyielding character of the pedicle the stout double ligatures thrown around it were found totally inefficient to control the hemorrhage from these numerous vessels. Other expedients were tried, but the same cause prevented any means of compression in mass or in subdivision from succeeding, so that it became necessary to secure each vessel separately, which was done; most of them were ligated, while torsion was practised with a few. Very little blood was lost, comparatively, during the operation, the gentlemen assisting me rendering valuable aid in compressing the pedicle during the ligation of the vessels. The peritoneal cavity was then carefully sponged out, and the wound, which it had been found necessary to enlarge so that it finally extended nearly from the ensiform cartilage to the pubis, was closed with silver wire sutures including the peritoneum, alternated with silk sutures involving only the skin and cellular tissue; the pedicle, with its bunch of ligatures, was secured in the inferior angle of the wound. The patient, whose pulse had continued good throughout the operation and whose surface was pleasantly warm, was then put to bed, warmly covered, and surrounded with bottles containing hot water. She rallied promptly from the chloroform and expressed herself as feeling moderately comfortable, though she complained constantly of thirst. The operation occupied about an hour and a half.

The Tumor.—Weight forty pounds. Upon section was found to consist of layers and bundles of fibres eccentrically arranged, running in different directions, but at somewhat regular intervals gathering themselves into a concentric shape, and running round a small cyst. These cysts, dispersed with considerable regularity throughout the tumor, varied from the size of a walnut to that of a small bullet, and uniformly contained a homogeneous gelatinoid substance; the portion of the tumor immediately surrounding these cysts, occupied by the concentric laminæ, was pale and poorly supplied with blood, while the remainder of the tumor was enriched by a most abundant circulation.

Just at the point of entrance of the pedicle into the tumor, a smaller tumor, about the size of a large orange, was attached to the larger one by a short and fleshy pedicle.

The patient died during the ensuing night from shock. The apparent rally after the operation was not maintained—thirst increased, jactitation came on, succeeded by symptoms of exhaustion, and these were rapidly followed by collapse and death; a result to be expected from the character of the tumor and the enormous amount of pressure that was suddenly removed from the vessels and nerves of the abdominal region, besides the large amount of blood which was actually removed from the circulation in the removal of the tumor.

Remarks.—It is, perhaps, needless for me to say that if the nature of this tumor had been made out before operating, the operation would not have been performed. The object of this paper is to call attention by adding this to the record of similar cases heretofore operated on by others under similar misapprehension, to the fact that the mistake made in this case is one easily made under similar circumstances, not only by the inexperienced, but by those who are careful to use all the means in their power to clear all points of doubt before resorting to so grave an operation, as even a favorable ovariotomy would be. In this case the tumor filling the abdominal cavity, and giving to the external appearance its oval form, was uniformly covered to the depth of about half an inch with the serous fluid effused in the peritoneum as a result of pressure—this fluid communicated the sense of fluctuation in examining the tumor, and alteration of the position of the patient produced no gravitation of the fluid to dependent parts, because of the complete filling of the abdominal cavity with tumor and exudation. The patient was not tapped or aspirated, a measure that would have pointed out the true nature of the tumor, in obedience to the opinion held generally, I believe, by ovariotomists, that this measure is not advisable in cases where an operation is contemplated, and where the other signs of an ovarian cyst are sufficiently clear as to leave no reasonable doubt as to the nature of the tumor. I think it will be agreed that this was the case in this instance.

Emmet, in his *Practice of Gynæcology*, records a case of a woman applying at the Woman's Hospital, New York, with a tumor for removal, which he at first suspected to be a uterine fibroid, but the woman being seen and examined subsequently by Drs. Sims, Thomas,.and Peaslee, and they holding the opinion that it was an ovarian cyst, he became convinced that they were right, operated for its removal and found it a uterine fibroid. The patient died from shock in a few hours. I cannot cite the page where the account of this case can be found, as I have not the book by me, but it is in his article on "Ovariotomy" in the edition of 1878 or 1879 of his valuable work on Gynæcology.

In the AMERICAN JOURNAL OF THE MEDICAL SCIENCES for October, 1871, page 433, Dr. Packard reports to the College of Physicians of Philadelphia, a case diagnosticated as ovarian cyst by himself and others, in which he proceeded to operate for the removal of the tumor; but, having introduced the trocar into the uterus, under the impression that it was one of the cysts, and having therefrom some troublesome hemorrhage, he secured the bleeding points, and then, considering the removal of the tumor impracticable, he desisted from the operation, and closed the wounds, uterine and abdominal. The patient, however, had symptoms of peritonitis and metritis, and died on the 14th day after the operation. An autopsy was made, and he says of the tumor that it "was fibrous and solid, and presented a most deceptive fluctuation; it seemed to have been developed from several centres, chiefly, perhaps, from the left ovary; a strong fibrous pedicle connected it with the upper and back part of the uterus. In the centre of one fibrous mass was what seemed to be a shrunken cyst. The whole tumor was judged to weigh thirteen or fourteen pounds," etc.

In THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES for July, 1871, page 157, Dr. Walter F. Atlee reports to the College of Physicians of Philadelphia an operation performed by him on a woman fifty-two years old for the removal of a tumor about the size of the adult head, under the belief that it was a cyst of the right ovary. The tumor proved to be a uterine myoma, which nearly obliterated the cavity of the uterus; it weighed five pounds. This operation was really one of extirpation of the uterus. The patient recovered without a bad symptom.

I have within my own experience known two other cases, which I can only refer to, as they have never been published. One was in a western city, and multiple subperitoneal uterine fibroids were removed from a lady, under the impression that the tumor was a multilocular ovarian cyst, resulting in death from shock in a few hours. The operator was a distinguished ovariotomist from one of the large eastern cities, who went west for the purpose of operating. The other case occurred in one of the counties adjacent to this city, and was operated on by a surgeon of the section where the lady lived. This was also a fibroma of the uterus, and death resulted within forty-eight hours; cause unknown.

I do not wish to be understood as attempting to give the complete bibliography of what may be termed these mistaken operations. Suffice it to say that, since this operation, I have found record or reference to about a hundred of these operations under mistaken diagnosis. My object is simply to add to the clinical record of them, and also by means of such addition to set forth the need of the greatest caution in diagnosis. Tapping, when it is performed, ought to make the case clear, but even this sometimes fails, as it was performed in Dr. Packard's case without a diagnosis of fibroid being made.

My own case has some points of peculiarity as compared with the others. It was the only one, except Dr. Packard's, in which the tumor arose from the ovary, all the others being fibroids of the uterus; also it was the largest that has come within my observation or reading, and, lastly, its structure was, I believe, a very unusual form of ovarian disease. I regret that I cannot add a report of a microscopic examination of its minute structure, but none was made.

REMARKS ON SOME OF THE RELATIONS WHICH ANIMAL HEAT AND NERVE FORCE OR MOTION BEAR TO EACH OTHER.

BY ROBERT BIRD, M.D.,
OF COBHAM, VA.

HEAT and nerve force—are these mutually convertible? Light, when it impinges on the retinæ, becomes physiological force;[1] sound may, when it falls on the auditory nerve, induce neuralgia—that is, physiological changed into pathological motion;[2] while words conceived in the brain may become physiological motion in the mouth and hollows of the throat, physical force in the atmosphere, and again physiological motion in the auditory nerve and the brain, as happens when we select and speak words to produce an echo.[2] This being the case, it is not unreasonable to suspect that heat may, under certain circumstances and conditions, become directly transformed into nerve force or motion, and, *vice versa*, that nerve force may be transformed into heat. By directly transformed is meant that the one is changed into the other directly as heat is changed into electricity in the thermo-electric pile, and not through a chemical or any other medium.

In the processes which constitute artificial egg-hatching, we have, at the touch of heat, an instance of development of lowly organized matter into an animal in which the higher displays of life are manifested. It has not yet been experimentally demonstrated that in these processes heat is directly transformed into nerve force or motion, but that it is so appears to be assumed by at least one of our leading physiologists.[1] When this reasonable assumption has been strictly verified, it will then clearly appear that nerve force takes its place in the circle of the forces, and does its share of work in the general round. The warmth of the egg-hatcher leads to the hatching out of fully developed chickens, which are capable of doing all that chickens hatched in the ordinary way are capable of doing. They eat and grow, move about, and deal as intelligently with their surroundings as chickens usually do, and in time they may produce eggs, and hatch them in the natural manner. Here we have artificial heat, nerve force, animal heat, and nerve force following each other in orderly succession, the result of which, as these operate on organic matter, is a complex physiological display, constituting a fowl and its life. In the course of this physiological development, we see, on the one hand, that the cell or egg has certain tendencies and capacities which compel and enable it to develop in certain directions, within certain limits, and after certain patterns, and, on the other hand, we see the numberless and far-reaching operations of the nervous force ministering to the growth, the maintenance, and general well-being of the body. Heat in these processes can scarcely take the place of these tendencies and capacities, but it may reasonably be concluded that it is, in some way, and to some extent, changed into the nerve force, which, as it were, carries out their mandates.

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[1] See the author's paper in Indian Medical Gazette, Calcutta, November, 1880, "On the Retinal Spectra."

[2] On Sound as a Cause of Disease, *Idem*, April, 1874.

Chossat,[2] in the course of his experimental researches into the effects of starvation on animals, found that these continued to lose in temperature as the starvation was continued, and that when the loss had reached a certain limit (varying in the individuals experimented on), the animals suddenly died. But he also found that, when this limit was nearly reached, and the animals about to die, if he applied external warmth the dying creatures at once began to recover the use of their senses and their muscles, and took food when it was offered to them. Further, if the application of artificial warmth was continued long enough, they digested the food, gained in temperature and strength, and soon again became independent animals; but if it was withdrawn too soon, they relapsed and died. The restoration to life in these experiments which followed the application of heat was, I think, too sudden and quick to admit of any other conclusion than this, viz., that the heat became directly transformed into nerve force in the nerves and nerve centres, which, permeating the dying tissues, maintained vitality till the restored sustenance had been digested and assimilated.

John Hunter[3] instituted some experiments to test the power of living bodies to resist the effects of heat and cold. In one of these he immersed a dead and a living penis in warm water, and carefully measured the rise of temperature in each. He says "the living and dead parts, being both immersed in water gradually made warmer from 100° to 118°, and continued in that heat for some minutes, the dead part raised the thermometer to 114°, while the living raised it no higher than 102½°. It was observed by the person on whom the experiment was made that after the parts had been in the water about a minute, the water did not feel hot; but on its being agitated it felt so hot that he could hardly bear it. Upon applying the thermometer to the sides of the living glans the quicksilver immediately fell from 118° to about 104°, while it did not fall more than a degree when put close to the dead; so that the living glans cooled the surrounding water to a certain distance."

At first it appears as though the dead penis had taken in more heat than the living penis, but that this is only in appearance is indicated by the living glans cooling the surrounding medium from 118° down to 104°, so that this (the living glans) not only absorbed the 14° missing from the water in contact with it, but its own special share of heat also. What did it do with the missing heat? That is the 14° added to the 11½° which marked the difference between the temperatures of the dead and living parts. That it absorbed them is certain, but that it did not continue to retain them in the form of heat is equally certain, as the applied thermometer only registered a temperature of 102½°, while the surrounding medium stood at 118°. Nor can it be concluded that it conveyed them away by conduction, for heat travels much too slowly among the living tissues by conduction to admit of the phenomenon being explained in this way. By a process of elimination we are almost driven to conclude that the missing heat, having been transformed into nerve force, was, in this form, transferred to the nerve centres. The above simple experiment, made by so exact and eminent a man as John Hunter was, will bear a good deal of thinking over. In explaining the restorative effects of heat on animals rendered insensible by exposure to cold, or the increase in the mortality, which invariably occurs among the very young and very old, when the weather suddenly becomes very hot or very cold, a chemist would use the principles of chemistry, and a physicist the principles of physics, while a physiologist, if he would arrive at the truth, must use all the principles, whether these are mechanical, chemical, or physical; and when, on the one hand, he teaches that the force which fills the brain and other ganglia is mainly produced chemically through the oxidization of the nerve substance, he may, on the other, admit that in some instances and to some extent it is derived directly from heat, and that in others it is reconverted into heat, and as such radiated into the colder space of the surrounding atmosphere. The capacity of the nervous system, however, is limited in dealing with heat impinging on it. When acted on by more than it can dispose of, then death results—the death of a part if the application be local, or death of the whole body if the application be general, as instanced by burns and scalds ensuing on contact with hot water and hot metals, and by the occurrence of *coup de soleil* and heat apoplexy—the result of exposure to the sun's rays in tropical climates.

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[1] Carpenter. See his Human Physiology, ch. i.

[2] Experimentales Recherches sur l'inanition, and Todd and Bowman's Physiology, vol. ii. ch. xxx.

[3] Palmer's edition of his works, vol. iv. pp. 140, 141.

"When the doctrine now known as that of the conservation of energy was first worked out in regard to the production of animal force, it was supposed that every exertion of muscular power involved a metamorphosis of the tissue of the muscle itself sufficient in its amount to produce the mechanical equivalent of the heat that would be otherwise liberated by the combustion of its hydrocarbon. But the observations of MM. Fick and Visliscenus on the increase of urea and other nitrogenous products of the disintegration of the muscles which shows itself in the urine during and after prolonged muscular exertion, confirmed, as they have been, by the results of many similar inquiries, seem to place it beyond doubt that the amount of motor energy put forth is so completely out of proportion to that of the muscular tissue, which we can suppose to have been consumed, that we cannot do otherwise than attribute it in great part to the oxygenation of the non-azotized components of the blood during its passage through the muscle."[1] As the question is still an open one, the discrepancy above alluded to might also be explained by affirming that, in muscular contraction, the nerve force poured upon the muscles is transformed into motion, as heat or electricity is in moving machinery, and that the excreted urea is merely a measure of the waste of the muscle doing the work, and not of the force by which the work is done. This statement is supported by many other phenomena, and scarcely contradicted by any. During and after the convulsions of epilepsy, and the exacerbations of the spasms in tetanus, the temperature of the body rises. In epilepsy, I have seen the temperature rise from 99° to 104°, and in tetanus it has been noted as high as 110°.[2] To all appearances, there is in these diseases a sudden and violent overflow of nerve force from the centres upon the muscles—an overflow which is too excessive to be wholly used up in the ordinary way. The muscles convert the larger proportion into violent motion, while the remainder is converted into heat through resistance, just as electricity is converted into heat in its passage through platinum. It does not ever appear that muscles are capable of contracting without the application of some stimulus, while it does appear that the ability of the muscle to contract at all depends on its tissues being maintained in a certain condition. But in debating this question, it is necessary to separate the instrument and the force which moves it. Brown-Séquard's experiments[3] show how essentially necessary a sufficient supply of arterial blood is to the maintenance of contractility, but they do not indicate that the blood furnishes the motive power. Nerve force is the natural motive power of muscle, but some other forces may be substituted for this in producing muscular contraction, as, for instance, physical contact. It must, however, be noted that these forces, or stimuli, come from outside the muscle, and are not inherent in it or a property of it.

Pathology in many of its phases supports the statement that nerve force is directly convertible into heat. The rise of temperature in ague does so. In the beginning of this disease the patient complains of feeling very cold, and shivers. Yet simultaneously with the coming on of the shivering the temperature of the skin begins to rise, and in the course of a few minutes, and while the patient is still shivering, the skin has grown burning hot. It appears to be almost necessary in this instance, in the absence of any other satisfactory explanation, to attribute the sudden rise in temperature to a sudden metastasis of nerve motion from the centres upon the periphery. For it can scarcely be attributed to an increased flow of blood through the capillaries, and to an increase in the disintegration or oxidization of the tissues consequent on this; because there is no such increase in the blood flow, as is proved by the skin remaining blue and pinched, and that there is as yet no increase in the generation of carbonic acid in the tissues seems also to be proved by the labors of Lehmann,[1] which go to show that the amount of carbonic acid from the body is lessened and not increased in intermittent and other fevers. The trembling or irregular action of the muscles also indicates that a metastasis or overflow of the nerve force is in progress. Through what channels does the force or motion flow? Probably along or through both the afferent and efferent nerves, for the paradoxical experiment shows that the same nerve motion may travel along both.[2]

In proving that the generation of animal heat is at any rate not altogether dependent on the oxidization of carbon during respiration, or necessarily on oxidization of carbon at all, Sir Benjamin Brodie adduces the following cases: "A man met with an accident which occasioned a forcible separation of the fifth and sixth vertebræ of the neck attended with an effusion of blood within the theca vertebralis and a laceration of the lower part ot the cervical portion of the spinal cord . . . the patient in this instance died at the end of twenty-two hours from the period of the injury, and for a considerable time previously to his death, breathed at very long intervals, the pulse being weak and the countenance livid. At last there were not more than five or six inspirations in a minute. Nevertheless, when the ball of a small thermometer was placed in the inside of the groin the quicksilver rose to 111° of F. Immediately after death the temperature was examined in the same situation and found to be still the same."[3] Is it unreasonable to conclude that in this and similar cases the heat was generated by an excessive flow of nerve motion towards the periphery and the direct conversion, through resistance, of this into heat on the skin and outer tissues of the man. That this idea had at least partly formed itself in the mind of Brodie is evident from his further remark, "there seems to be no reason why the evolution of heat should not be one of the results of the operation of the nervous power as it is of electricity."[1]

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[1] Carpenter's Human Physiology, Smith's Edition, pp. 37, 38.

[2] Edward's Article, Animal Heat, Cyclopædia of Anatomy and Physiology, vol. ii.

[3] Journal de la Physiologie, 1858, vol. i., and Carpenter's Physiology, ch. xv.

[1] See translation of his works for the Cavendish Society or the American translation.

[2] Paradoxical contraction of muscle.

[3] Physiological Researches, pp. 120–121; and for a somewhat similar case see *Lancet* (London), March 6, 1875, detailed by Dr. Teale.

Dr. Dowler, of New Orleans, observed that the temperature of the bodies of those who had died from yellow fever often rose to a remarkable height immediately or shortly after death. In one instance just before death the temperature was 104° and fifteen minutes after death it had risen to 113° in an incision of the thigh.[2] It is very noteworthy that Dr. Dowler almost invariably found that the lowest temperature was to be met with in the brain. A corresponding rise of temperature is often observed in the bodies of those who have died from Asiatic cholera. In this disease, as is well known, one of the leading symptoms is great depression of temperature. It is not unusual to see this fall, as the disease progresses, from the normal standard to 85°, 80°, and even lower in the cold season, while after death it will often rise to 100°, 102°, or 104°. Now how are these post-mortem rises in the temperature to be explained? They cannot result from the oxidization of carbon during respiration, for respiration has ceased, nor from the processes of secretion, assimilation, or nutrition, for these also have ceased, nor from muscular contraction, for the rise is often an accomplished fact, before the slightest trace of rigor mortis is apparent. But can these processes, when in full operation combined with muscular contraction, and with the heat of fever thrown in to help, can they generate so high a temperature as 113°? The vital or physiological processes generate a temperature of from 98.5° to 101° according to the locality examined, while combined with fever they rarely, if ever, produce a temperature of more than 108° or 109°, but in Dr. Dowler's cases the post-mortem temperature exceeded the fever-heat, and in one instance when the fever-heat rose to only 104° the post-mortem temperature rose to 113°. I think we must attribute this remarkable rise to some other source than the after-death contraction of muscle. Can it reasonably be attributed as has been done in other cases—in cases of tetanus and injury to the spinal chord—to a metastatic flow of the nerve force? Water, when freezing gives out heat; is it permissible to say that the nerve centres when dying give out their special motion in copious flow along the nerves, and that, as this cannot now be utilized in carrying on the processes of life, it is necessarily converted into heat by collision with the dead tissues? In cases of death, after lingering illness, attended with much nervous exhaustion the post-mortem rise in the temperature is slight, if met with at all.

Bernard's[3] celebrated experiments on the sympathetic seem also to support the theory that nerve force is directly transmutable into heat. This physiologist showed that section of the sympathetic trunk in the neck was invariably followed by a rise in the temperature of the cheek on the corresponding side of the body, a rise of as much as 11° above the temperature of the other side. He further showed that excision of the superior cervical ganglion or section of the cerebro-spinal nerves of the face on the same side did not materially change the result of the experiment. Now, how is this rise to be explained? By attributing it to an increase in the circulating blood of the heated parts? This explanation can scarcely be received, for Bernard tied the vessels and yet the high temperature continued. Moreover, the temperature of inflamed parts never approaches 11° above the normal standard; but in Bernard's animals the high temperature continued for months without the supervention of inflammation or any other disease. While in Sir B. Brodie's experiments on animals under the influence of woorara, which dilates the capillaries, it was shown that the temperature declined while the heart was beating steadily.

Dr. Carpenter,[2] while attributing the rise to an increase in the flow of blood through the parts, seems to be conscious of the insufficiency of the theory, for elsewhere, he says, "in some instances, however, such variations seem to be independent of changes in the supply of blood. Thus Schiff has shown that irritation of the sensory nerve in a dog under the influence of woorara and therefore incapable of performing muscular movements, causes increase of temperature of one or other of the hemispheres of the brain, and was independent of changes in the circulation since it occurred, even as late as twelve minutes after the heart's action had ceased. Even irritation of the nerves of special sense will produce this effect, for it was distinctly perceptible in a thoroughly woorarized dog, before which an umbrella was suddenly opened." If then a change in the circulation or respiration cannot explain the rise of temperature in these instances, why should it be adopted to explain the rise in Bernard's experiments when it cannot possibly explain it? and if transformed mechanical force (irritation) in the case of the one dog, and transmuted light (reflected from the umbrella) in the case of the other produced the rise, why should it not be received that conversion of nerve force into heat produced it in the animals operated on by Bernard? Nerve force supplied by the ganglia *directly before* the excision of the superior cervical ganglion and section of the cerebro-spinal nerves, and indirectly by anastomosis after the section and excision. The removal of one ganglion lessened the source of nervous supply; it lessened, but did not suppress it. The reader, who in thought, is not familiar with the transformations of force within the tissues may read the following with advantage: "A patient was for some time in the London Hospital, in whom there was such an undue impressibility of the retinæ that she could not remain in even a moderate light without a continual repetition of the act of sneezing." In this instance the physical motion named light became in the tissues of the eye and brain transformed into physiological motion muscular and other.

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[1] Op. cit. p. 127.

[2] Todd and Bowman's Physiology, 425.

[3] Recherches' Expérimentales sur la Grande Sympathetique, Paris, 1854.

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[1] Human Physiology, Smith's edition, p. 546.

In reviewing the facts above adduced it seems difficult to deny that there is some ground for the belief that heat, under certain circumstances and conditions, becomes directly transformed into nerve force or motion in the nervous tissues. The parallel instances of sound and light becoming nerve motion in the organs of sight and hearing, the phenomena of egg-hatching by artificial means, and of the restoration of animals senseless from excessive cold under the application of external warmth, as also of heat accelerating and cold retarding the development and growth of vegetables, and of the lower animals, the action of heat on hibernating animals, the experiments of Chossat illustrating the effect of starvation on animals, and above all the experiments of John Hunter on the absorption of heat by dead and living tissues collectively and individually support the theory that heat is directly transmutable into nerve motion. While on the other hand the theory that nerve motion is directly transmutable into heat is supported by the rise of temperature, in tetanus and epilepsy, in intermittent fever, in some cases of injury to the spine, as for instance that described by Brodie, in the bodies of those who have died from yellow fever, cholera, and other acute diseases, and in the cheek after section of the sympathetic trunk in the corresponding side of the neck.

I am not arguing to show that heat is the main source of nerve motion, or that nerve motion is the main source of animal heat, but only to show that there are facts which indicate or, at any rate, support the hypothesis that heat is one of the sources of nerve motion, and nerve motion one of the sources of heat. That nerve force is one of the sources of animal heat appears to me to be taught more or less distinctly in the writings of Le Gallois, B. Brodie, Schiff, Bernard, and Prof. H. C. Wood, but the general opinion is that animal heat is exclusively derived from chemical sources. Physiology is, and always has been, colored by the prevailing science of the time, and in this way its history is the reflected history of general science. In the course of its development, it has been metaphysical, mechanical, and chemical, while now its constitution is getting to be colored and invigorated by the adoption and assimilation of the principles of physics. That it should be so is unavoidable—nay, it is right—for physiology, in its completest form (if it ever attain to such perfection), must be the sum and embodiment of all sciences, and if we would find the truth, we must use the principles and facts of all sciences in explaining and harmonizing vital phenomena. No one saw this more clearly than Liebig, himself one of the creators of animal chemistry; so he expressly cautions physiologists against the misuse of chemistry in these words: "From the false notion which has been formed of the influence of chemistry on the explanation of the vital phenomena, it has happened that, on the one hand, this influence has been estimated too low, and that, on the other, the expectations and demands on it have been raised too high.[1]"

A CASE OF TRAUMATIC AMAUROSIS.

By OLAF PAGE, M.D.,

OF VALPARAISO, CHILI.

The patient, aged 40, a porter by occupation, gave the following history: Two months ago, whilst carrying a load down some cellar-stairs, he missed the last step, and fell violently upon the floor, striking his face and forehead over the left eye. He did not lose consciousness, nor did he have any vomiting. On the fourth morning after the accident, he awoke with his eye very much swollen, and with total loss of sight. He had a leech applied, and a week later applied for advice. I found both upper and lower eyelid so swollen that it was impossible to open the eye. The upper lid was of a dark, livid color, and, with the exception of a small portion in the middle, intensely hard. The ecchymosed conjunctiva protruded between the lids. I made a small incision into the soft spot, giving exit to a little pus. He was given a weak carbolic-acid lotion to apply to his eyelids. In a week or ten days, the eye had become soft enough to enable me to separate the lids. The conjunctiva, swollen and hard, had become attached to the margin of the lower lid, so that I was obliged to separate it with a knife. On examination, the aqueous humor appeared very cloudy, and the pupil irregular. The movements of the eyeball were pretty free in all directions. A solution of atropine, one grain to the ounce, was prescribed, to use but once a day only, as he complained of no pain.

As the swelling went down, and the aqueous humor became less turbid, I discovered a posterior synechia on the nasal side of the iris. The rest of the pupil was apparently quite free. Five weeks from the time of the accident, I examined him with the ophthalmoscope, and found a complete atrophy of the optic disk. Not a single bloodvessel was to be seen upon its surface. I could find no hemorrhages in any part of the retina.

The right eye the patient had lost ten years previously, probably from gonorrhœal infection. The stump, however, was entirely painless on pressure.

As the patient never suffered from any brain symptoms, the mischief was probably limited to the orbit alone, the blow having fractured the orbital plate, which, with the extravasated blood, must have cut off the blood-supply to the optic nerve.

Valparaiso, June 13, 1883.

MEDICAL PROGRESS.

Prophylaxis and Treatment of Cystitis in Women.—Prof. Küstner considers that many cases of cystitis in the female are due to a transfer of septic material from the vulva into the urethra and bladder by means of the catheter, and recommends that catheterization should not be done by touch alone, but should be aided by the eye. Further, the vulva should always be carefully cleaned before catheterization. It is highly important to have a clean instrument, and he considers this impossible with the instrument generally used. Even when it is boiled in carbolized water and cleaned with a brush, some material, more or less septic, will be found adhering to the eye, which cannot be reached by the brush, even when the catheter has a perforated extremity. He recommends a simple, straight glass tube of the size of an ordinary catheter, with a bevelled opening for introduction into the bladder. Küstner says that the curve of the female catheter does not correspond to the normal course of the urethra, which has been found by vertical sections to be either straight or sometimes S-shaped, never C-shaped, and consequently a straight tube will answer perfectly well. These catheters have been in use in Küstner's clinic for a long time, and no case of vesical catarrh has occurred since they first began to be used, although some patients have been catheterized as many as forty times after severe operations. The bevelled edge of the catheter is ground very smooth, and of course a catheter with a chipped place in the end must be thrown aside.

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[1] Animal Chemistry, 3d Edition, p. 252, Gregory's translation.

Local treatment, washing out the bladder, is the best means of treating vesical catarrh. The ordinary instruments in use for this purpose, double-current catheters or T-tubes with India-rubber tubing, are insufficient for this purpose. Küstner uses a glass funnel-tube, somewhat like his catheter, into which a hollow stopper fits. When the bladder is full, the stopper is removed, and the urine escapes. For irrigation, he formerly employed weak carbolic solutions, but he now uses corrosive sublimate solution, 1 to 5000, giving not more than two irrigations in a day. By this means, severe cases of cystitis have been cured in two weeks. This funnel-tube and stopper are made by Otto Kloppe, Johannisplatz, Jena. [It may be pertinent to inquire why the stopper should be hollow if it must be removed when the urine is drawn.]—*Deutsche med. Wochensch.*, May 16, 1883.

Nussbaum's Treatment of Cancer.—Prof. Nussbaum noticed, several years ago, that indolent ulcers of the leg rapidly improved when an incision was made around them, at about a finger's width from their margin, and down to the fascia, the incision being prevented from healing. Not long ago he treated a case of cancer of the mamma, with so strong a tendency to hemorrhage, that each dressing of the ulcer threatened her life. As the patient was nearly moribund from the frequent loss of blood, Nussbaum surrounded the tumor with a strong subcutaneous ligature, which he drew together with all his strength, and then tied. The patient rallied completely. Not only was the hemorrhage arrested, but the tumor decreased to one-quarter its size, and the ulcer began to cicatrize. The patient's strength rapidly increased. Nussbaum, therefore, now proposes completely to prevent the feeding of these tumors by their peripheral nutrient vessels. The blood which supplies the tumor through its base is sufficient to keep it stationary, whilst it does not absolutely starve it. In order to accomplish the desired interruption of the supply from the periphery, Nussbaum urges the formation of a furrow around the tumor, down to the fascia, about one centimetre wide, not with the knife, however, but with the thermocautery. In the above-named case a tubercle had not been included in the ligature. Nine months after the application of the latter, this tubercle had grown, and had thus reached the tumor of the mamma, which tumor had meanwhile become quite solid. The tumor now began to grow again, and even to bleed. Nussbaum, therefore, surrounded all the isolated tubercles with a deep furrow, and their growth evidently stopped. Six weeks later they were still shrinking. Nussbaum thinks that the thermocautery or the actual cautery is much more useful than is generally believed. The subjective condition of the patients, their strength and appetite, are much better after an operation with the cautery than with the knife; the wound heals quicker, except in cases where approximation by sutures can be employed after knife operations; and relapses are much delayed. Nussbaum ascribes these advantages partly to the absence of loss of blood, and partly because the nerves and bloodvessels, being covered with cicatrix, are protected from the influence of the air.—*Physician and Surgeon*, July, 1883.

Uterine Fibroids Becoming Sarcomatous.—At the meeting of the K. K. Gesellschaft der Aerzte, of Vienna, on April 6, 1883, Prof. Kundrat presented two specimens of fibroid tumors of the uterus which had become sarcomatous. The first occurred in a woman, æt. 37, who had died of peritonitis from perforating round ulcer of the stomach. The tumor was situated on the posterior wall of the lowest part of the uterus and cervix, was about the size of an ostrich egg, filled the whole pelvis, and projected, by its smaller end, into the enlarged vagina; this portion having the microscopic appearances of a fibroid. Near it, in the posterior wall of the vagina, was a superficial ulcerated nodule as large as a walnut, and numerous metastatic points were found in the liver and both lungs.

The second patient was a woman, æt. 57, a victim to septic poisoning, after an attempt to remove the tumor by laparotomy. The tumor, half as large as a man's head, was situated in the posterior wall of a considerably hypertrophied uterus, with a prolongation between the folds of the left broad ligament. This tumor also contained, as did the first, a softened medullary spot of degeneration, but its original character was clearly shown.—*Medizinische Jahrbücher*, 1883, Hft. ii.

Rhabdomyoma of the Orbit.—Rhabdomyoma, or a tumor containing striated muscular fibres, is a very rare affection, and Dr. S. Bayer, of Stockholm, who describes a case of the kind in a recent number of the *Nordiskt Medicinskt Arkiv*, has met with only twelve instances of it in the course of his reading. His own case was that of a tumor extirpated from a little boy three years old, and which had been observed two months before the operation, penetrating between the globe of the eye and the lower eyelid, and pushing the former from below upward. The tumor was of an oval form, resembling a fibrous tumor in its consistence and in the appearance of the cut surface. On microscopical examination it was found that the neoplasm was chiefly composed of muscular fibres with transverse striæ, but that the greater part of these fibres had at the same time longitudinal striæ. These striæ were either pressed against one another, forming fasciculi arranged in different ways, or diffused in an intermediate substance rich in nuclei. At the points where the fibres are pressed against one another they interpenetrate by points. Caustic potash immediately dissolves the nuclei of the fibres, but causes the distinct appearance of the transverse striæ, while acetic acid causes the nuclei to appear clearly, but dissolves, although slowly, the transverse striæ. A longer treatment with caustic potash or acetic acid causes the dissolution of the whole, as happens in striated muscular fibres, which the striated elements of the tumors resemble, moreover, in this respect—that they present the same double refraction when examined by polarized light. An identical method of examination demonstrated the same property of refraction in the fibres of a tumor of a rhabdomyomatous nature preserved in the Pathological Institute of Stockholm. The mass which combines the muscular elements in the tumor now described by Dr. Bayer, is a delicate granular substance with round nuclei, which, with preparations of osmium, are dissolved in cellules provided with broad or slender prolongations, anastomosing with those of the adjacent cellules. As to the question of the origin of the tumor, the author can give no other explanation than by admitting the presence of fœtal muscular elements, which probably remained at the base of the orbit, and to the subsequent development of which the neoplasm now described was probably due.—*Med. Times and Gaz.* July 28, 1883.

Gelsemium in Submammary Intercostal Neuralgia.—J. Chéron states that a good many women suffer from a localized pain in the left infra-mammary region, which is due to uterine disease. In some cases it is so painful and persistent that the primary affection may be overlooked. More or less success has attended the use of quinine, aconite, morphine, atropine, the bromides, etc. Chéron has had good results from the use of the following: Tinct. gelsemium gtt. c, simple syrup ℥ij, distilled water ad ℥viij. S.—Dose, three to five dessertspoonfuls half an hour before meals, or three hours after. Sometimes there are extremely painful spots in the course of a nerve, and running back to the spine. These may be painted with tincture of iodine every three days.—*Progrès Méd.*, June 16, 1883.

Application of Iodoform to Peritoneal Wounds.—At the meeting of the Twelfth Congress of the German Surgical Society, Küster explained his method of making iodoform applications to the peritoneum, so as to obtain the full antiseptic action, and at the same time obviate the dangers of toxicity. In cases of ovariotomy, he wipes a sponge, which has been dipped in iodoform, over the coils of intestines, having taken care that all the superfluous powder has been shaken off, so that only a very thin film may adhere to the peritoneum. An iodoform plug is also placed in the vagina. In wounds of the face, about the genital organs, or in other situations where the ordinary antiseptic dressings cannot be easily used, he recommends iodoform collodion.

Among sixty cases treated by him in this manner, there was after-bleeding in only one, all the others having promptly convalesced.—*Deutsche med. Woch.*, No. 17, 1883.

Crotalus in Malignant Scarlatina.—Dr. John W. Hayward publishes the results of the treatment of two cases of malignant (hemorrhagic) scarlatina by crotalus. In the first case the symptoms were very aggravated on the second day. The throat was nearly closed, and she breathed with difficulty, with an occasional interruption, as though due to the swollen condition of the tonsils and fauces, which appeared softened, jelly-like, and as if gangrenous; the head was thrown upward and backward as far as possible; there was severe retching when anything was put into the mouth, even a teaspoonful of cold water provoked it, and the matter ejected consisted of dirty-brown mucus, apparently colored with disorganized blood oozing from the mucous membrane, or resulting from the gangrenous state of the fauces and tonsils, and there were some bloody streaks as if from blood forced out by the act of retching. After the retching she would fall back on the pillow, moaning in a very weak, low voice, as if dying; and she sank down into the bed in a state of stupid lethargy, like a dying typhus patient. The rash was only faintly visible, and the case apparently hopeless. He determined to try the effect of crotalus, which had been much recommended in the treatment of putrid and hemorrhagic diseases, when introduced subcutaneously as well as by the mouth. The cuticle was consequently removed from round the throat by a cantharides blister, and to the exposed cutis a wet compress sprinkled with crotalus was applied, and renewed at first after half an hour, and then every three hours, also a dose dissolved in a teaspoonful of water was dropped on the tongue every half hour. The effects were watched anxiously. There was no more retching after the first application of the crotalus to the denuded cutis, even when teaspoonfuls of beef-tea were put into the mouth; but the restlessness, pulse, and other symptoms continued much the same all the evening. During the night she gradually grew less distressed and dozed at intervals; toward morning she really slept, and the breathing gradually became less labored and irregular. On the morning of the third day the pulse could be distinctly felt, and was only 120, the respiration was becoming easy, the head was less thrown back, and the struggle appeared to be turning in her favor. The rash was now freely out on the body and legs, but it was of a purple color. The same medicine was continued internally, but now only every two hours, and the crotalus was no longer sprinkled on the compress. During the day the rash gradually brightened in color, and all the distressing symptoms receded rapidly, so that by evening she was able to drink with but little difficulty or pain; the respiration was almost normal; and the pulse was 100, and had gained considerably in force and fulness. From this time improvement went on rapidly, and on the ninth day she was well.

The same treatment was used on the brother of the patient referred to above, and with like happy results. Dr. Hayward has tested the drug again and again, and is thoroughly convinced that crotalus is a reliable remedy in this disease.—*Lancet*, July 14, 1883.

Diagnosis of Urethral Discharges.—P. Fürbinger, in a paper in the *Monats. für prakt. Dermatol.*, 1883, Heft 2, enters into a discussion of the differential diagnosis of the different discharges from the male urethra. 1. Spermatorrhœa is the unnatural loss of seminal fluid which regularly occurs during the act of defecation and at the end of micturition (without an orgasm). This condition, more common than is usually supposed, is not the first stage of morbid pollution. Gonorrhœa and sexual abuses are its most common causes. Spermatorrhœa will become azoöspermatorrhœa when the testicles cease to secrete spermatozoa, usually from epididymitis, when azoöspermia exists at the same time. 2. Prostatorrhœa is the discharge of the prostatic secretion, sometimes continuous, at others only during defecation and micturition. It is a rare condition, and a symptom of chronic prostatitis, usually following gonorrhœa. 3. Urethrorrhœa *ex libidine* is a condition usually seen in anæmic and nervous subjects, and consists of a scanty discharge, with strong sexual excitement and erection, but without ejaculation or orgasm. Of these conditions, two are recognized without difficulty. Spermatorrhœa is diagnosticated by the presence of large numbers of spermatozoa—a few signify nothing; and urethrorrhœa by its characteristic mode of onset. The secretion of urethrorrhœa, which comes from Cowper's and the urethral glands, is clear, stringy, and containing only a few epithelial and round cells. Azoöspermatorrhœa is characterized by an abundant discharge, and by the absence of pus-corpuscles, although their presence has no especial weight on the other side, as there may be a coexisting urethritis. In such cases, the diagnosis must be determined by the specific secretion of the seminal vesicles. If a jelly-like substance, resembling grains of sago in shape, be found, it is conclusive; if not found, it may be in solution, and will be precipitated by a concentrated alkali. The secretion is allowed to stand for some time, when a clear drop is placed on a watch-glass, and a drop of caustic potash added. If the drop shows a thick white cloud, or streaks, the secretion contains seminal fluid; if, however, it shows that there is no azoöspermatorrhœa, the diagnosis rests between prostatorrhœa and chronic gonorrhœa. In gleet the discharge is very scanty, drop by drop. In prostatorrhœa, digital examination of the prostate shows that that gland is painful on pressure.

The indications of prostatorrhœa are: 1. The presence, though not constant, of numerous amyloid bodies. 2. Numerous typical cylinder cells, especially if in the double-layer arrangement of glandular epithelium. 3. The large Böttcher's crystals, the presence of which is ascertained by mixing a drop of the secretion with a drop of a one per cent. solution of phosphorated ammonia on an object-glass. In about an hour, the crystals, numerous, large, and very beautiful, are found. The Böttcher's crystals are a constituent part of the prostatic secretion, and show that the prostate is involved. The prostatic secretion is not, as usually stated, a clear, odorless, thick secretion, but is thin, of a milky cloudiness, and has the characteristic odor of semen. The time at which the secretion appears in the urine is also a diagnostic aid. The first and last portions of the urine must be separated from the principal flow. If the secretion is in the first portion, gleet may be diagnosticated; if in the first and second, prostatorrhœa; and if in the last, azoöspermatorrhœa, which appears in the form of almost transparent, thick, ropy masses, and occasionally in the form of sago grains.—*Centralbl. für klin. Med.*, No. 16, 1883.

CAUSE OF THE HEART-SOUNDS.—DR. C. SANDBORG has succeeded, by means of a special apparatus, in producing an alternate dilatation and compression of the heart of an ox, and consequently imitation of the blood-current and play of the valves. The results show that the heart-sounds, the first as well as the second, are produced by vibrations which originate in the sigmoid valves. The first sound is produced by the vibrations which the blood-current, expelled in systole, produces on the free borders of the valves. The second sound is produced by the tension of the sigmoid valves from the arterial shock, at the beginning of the ventricular diastole. In order to demonstrate theoretically why the tricuspid and mitral valves are so constructed as to make no sound, when in the healthy condition, which is perceptible, Sandborg made the following experiments: 1. He fastened the auriculo-ventricular valves and left the sigmoid valves loose. 2. In another heart the right auriculo-ventricular and left sigmoid valves were drawn back, the mitral and pulmonary valves being left free. 3. In a third heart the aortic and pulmonary valves were fastened, the mitral and tricuspid being free. 4. In a fourth heart, the mitral and pulmonary valves were fastened back, and the tricuspid and aortic left open. These experiments showed plainly that both sounds of the heart could only be heard when the sigmoid valves acted freely, and nothing was heard when the auriculo-ventricular valves alone were free. Sandborg is now studying abnormal heart-sounds, and thus far has been able to reproduce double systolic and diastolic souffles.—*Revue Méd. Franc et Etrang.*, July 7, 1883.

SUPPRESSION OF SALIVA AFTER MUMPS.—MR. A. ST. C. BUXTON reports this case occurring in a lady of middle age. No sense of taste was retained, the mouth felt hot although the temperature was normal; there was intense thirst which was not relieved by drinking, and there was great difficulty in feeding her. Infusion of jaborandi, iodide of mercury, mouth washes of glycerine were equally inefficacious in provoking a flow of saliva. A silver probe was then introduced into the ducts successively, and the negative pole of a thirty cell Leclanché battery applied to the free end of the probe, the positive pole being applied to the nape of the neck. This proceeding produced a copious flow of saliva, which continued in the normal manner. Complete suppression of saliva in both parotids and submaxillaries is a very rare occurrence.—*Lancet*, June 23, 1883.

PREGNANCY AND PARTURITION WITH A CANCEROUS CERVIX UTERI.—PROF. MIDDLETON MICHEL reports the case of a woman, æt. about 30, the mother of several children, who, believing herself pregnant, consulted him with reference to a bloody discharge unattended by pain, which recurred whenever she had sexual intercourse. An examination revealed unmistakable disease of the entire neck, too extensive to permit of its excision, particularly as there were signs of pregnancy, of which she seemed quite sure. A saturated solution of carbolic acid and alum with glycerine was used as an injection awaiting the further development of positive pregnancy. There had been no suspicion of disease, as there had been no pain, and a bloody discharge only after connection. All coition was forbidden during the injections.

At the time of confinement there were no unusual symptoms. She was delivered in due time and without any especial inconvenience of a well-developed child. She herself survived only for three months, in such a state as not to have been able to take care of her infant.—*North Carolina Med. Monthly*, July, 1883.

At the meeting of the K. K. Gesellschaft der Aerzte, of Vienna, on May 11, 1883, DR. FELSENREICH related the history of a case in which pregnancy was complicated by carcinoma. The woman, æt. 30, was the mother of several children. She was admitted to the hospital at the end of the eighth lunar month. During the sixth month there was a period of five days' hemorrhage, but there was no other hemorrhage. On February 28th, there was an escape of liquor amnii, labor set in on March 1st, and on March 4th she was brought to the clinic (in the eighth month). The carcinoma had then extended over the infra-vaginal and middle part, and digital examination showed a stiff and friable condition of the cervical canal. Spontaneous delivery being regarded as impossible, with the consent of Dr. Braun-Ferwald, Dr. Felsenreich removed the carcinomatous growth, and thus made room for the delivery. A female child was delivered, and the placenta soon followed spontaneously. The uterus was then thoroughly disinfected and removed by the supra-vaginal operation, and the wound dressed with iodoform. On the third day urine escaped per vaginam. A carcinomatous nodule was found to be the cause of this, was removed, and the fistula closed. Two months afterward the woman was, to all appearances, well.—*Medizinische Jahrbücher*, 1883, Hft. ii.

CONSOLIDATION OF FRACTURES IN DIABETICS.—During the past eleven years, M. VERNEUIL has made four personal observations on this subject. The first case was one of compound fracture of the left leg; the second a fracture of the humerus in a badly nourished patient; the third a fracture of both bones of one forearm; and the fourth a fracture of the lower extremity of the radius. These patients were all diabetics. Though this is too small a number of cases from which to draw general conclusions, they tend to show the evil influence of diabetes on the formation of callus. In only one case of the four did the formation appear to be normal, and in the other three the formation was very defective. By a singular chance, these three cases represented the three different degrees of the same lesion—tardy consolidation, imperfect consolidation, and non-consolidation. In investigating the causes of these anomalies of the reparative forces, it is difficult to dispute the part that the dyscrasia must play, for in each of the three cases the fracture was easily reduced and kept in place by suitable apparatus. There was no fault to be found with the mechanical part of the treatment. No difficulty was experienced in keeping the small wound closed in the compound fracture of the leg, and there was no suppuration.

M. Verneuil concludes his paper with the following propositions: 1. The retardation and absence of consolidation found in the three cases seem to be due to diabetic dyscrasia. 2. This retardation and absence of consolidation necessarily imply a diminution or suppression of the reparative forces, and particularly of nutrition. 3. From these facts, we may conclude that diabetes, when it embarrasses or stops the formation of callus, does so, at least indirectly, by impairing nutrition.—*Gaz. Hebdom.*, July 27, 1883.

INTRAVENOUS INJECTION OF SALINE SOLUTIONS.—DR. L. SZUMAN reports a successful case of intravenous injection for anæmia after traumatism and operation. Besides this case, he mentions eight successes, and gives the following as the advantages of this therapeutic measure: 1. One can always get the requisite fluid. 2. The operation requires no special apparatus, as an injection apparatus and a canula or probe-trocar are always at hand. Thorough antiseptic precaution must be observed with regard to the instruments. 3. Saline solutions in cases of acute anæmia must supersede transfusion of blood.

Dr. Szuman's case was that of a boy, æt. 15, who had sustained a compound fracture of the surgical neck of the right humerus, with laceration of the capsular ligament, and fractures of the right femur and tibia. When seen, the patient was in a state of collapse, the face, lips, and conjunctiva bloodless, and he was almost pulseless. Szuman decided to resect the shoulder-joint, and chloroform was cautiously administered. The wound was dressed antiseptically. The collapse was so great, however, that artificial respiration was employed, the head lowered, and ether injected hypodermatically, with the result of rallying the patient. On the next day, the lips were blanched, he was very feeble, and rejected food. Vomiting set in in forty-eight hours. During a change in the dressing of the wound, convulsive twitchings came on, increased, and the patient became unconscious. As the patient seemed to be dying of cerebral anæmia, ether was again injected, the upper extremity lowered, the limbs rubbed with camphorated spirit, and the uninjured limbs bound with elastic bandages. Intravenous injection of saline solution was then made: ʒiss of common salt and grs. xv of carbonate of soda were dissolved in ℥xxxivss of distilled water. A carbolic disinfectant was employed, there being no transfusion apparatus at hand; a small drainage-tube was fixed to a fine trocar; this was inserted into the median vein (into which the canula was fixed), and the fluid injected until about ℥viij had been injected, when the patient opened his eyes, the spasms stopped, and he began to talk. After about ℥xxiv had entered the circulation, the pulse fell from 144 to 112, and he began to complain of being cold; the injection was accordingly discontinued, and the ligature removed from the vein. From this time, he steadily improved, and finally completely recovered.—*Berliner klin. Woch.*, No. 21, 1883.

TREATMENT OF PHIMOSIS BY DILATATION.—M. DE SAINT-GERMAIN considers dilatation as the best means of treating congenital phimosis, even in the adult. He uses Nélaton's dilator with three blades, but has successfully used Trousseau's double-bladed dilator. He thinks that dilatation is applicable to all cases of phimosis, except those in which the preputial mucous membrane is thickened and of almost cartilaginous hardness. The blades of the dilator are introduced as far as the base of the glans penis, the instrument opened, and the amount of the constriction produced on the mucous membrane of the prepuce is determined by the degree to which the instrument opens. When the double-bladed instrument is used, the dilatation converts the narrowed preputial orifice into a buttonhole slit, and a second dilatation completes the operation. It then only remains to break up the adhesions existing between the gland and the prepuce, and during the next few days the prepuce should be regularly drawn back, and the parts dressed with borated vaseline.—*Revue Méd. Franç. et Étrang*, June 9, 1883.

PATHOLOGICAL CHANGES IN COLCHICIN POISONING.—At the close of a paper on the pharmacological study of colchicin, DR. HEINRICH PASCHKIS thus summarizes the anatomical changes found after death: The lungs are, as a rule, pale, and contain but little blood. In only one case did the lungs contain much blood, and several times there were hemorrhagic spots on the pleuræ, absence of diarrhœa, with vomiting and cramps. The heart is seldom empty of blood; usually the right or both ventricles were filled with black thrombi. In one case, the pericardium contained a hemorrhagic spot. The peritoneum is generally injected, with small hemorrhagic foci here and there, the same condition being true of the diaphragm. The omentum also contains hemorrhagic spots. The spleen is generally contracted, wrinkled, bloodless, and the liver containing but little or no blood. The kidneys are pale; the cortical and medullary substance bloodless. The bladder is moderately contracted, containing a little urine. The mucous membrane of the stomach and intestines is reddened and markedly hyperæmic, with numerous hemorrhagic spots. Microscopic examination shows widespread extravasation in the submucous tissue and partial lifting up of the epithelium in the mucous tissue by small extravasations. These hemorrhagic spots are found in the whole of the intestinal canal and in the stomach, the folds of the mucous membrane being always prominent; they are frequent and large, except at the pylorus, which is always firmly contracted, and in the region of the ileum and large intestine; they are punctiform, striated, or streaked often to such an extent that the mucous membrane resembles coarse bluish-red cloth. The contents of the stomach are a clear to dark-yellow mucus, sometimes containing transuded blood. Finally, the membranes of the brain are hyperæmic.—*Medizin. Jahrbücher*, 1883, Hft. ii.

MICROBES IN THE LIQUIDS OF THE NORMAL ORGANISM.—MM. OLLIVIER and RICHET have recently made further investigations on the existence of microbial elements in the organic liquids of fish in the normal state. They have already found microbes in the lymph of the peritoneal, pericardial, and cerebrospinal cavities. Now they announce the discovery of these elements in the blood of fish, taken during life, and from the heart itself, with proper antiseptic precautions. Culture of these microbes has not caused putrefaction in clean, hermetically closed tubes, while the blood, placed in open vessels, has undergone rapid putrefaction. They conclude that the lymph and blood of fish normally contain microbial elements, of which the nature and development remain to be determined.—*Gaz. Hebdom.*, July 27, 1883.

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SATURDAY, AUGUST 18, 1883.

CHOLERA PREDICTIONS.

THE panic caused by the rapid spread of cholera in Egypt is subsiding in the absence of cases in European ports, and the representatives of commercial interests are now inclined to think with Noah's neighbors of old, that "it isn't going to be much of a shower after all." Among others the United States Consul at Smyrna, Mr. W. E. Stevens, in his report of July 13th, adopts the theory, at first offered by British officials, that the Egyptian outbreak is not true Asiatic cholera, but a disease of local origin, due to bad sanitary condition and impure water supply. It is needless to occupy space with the arguments which he gives in favor of this theory, for by this time those who advanced it are probably satisfied that if the disease is not Asiatic cholera, it is not distinguishable from it as to symptoms, results, or power of infection. The chief argument in favor of its local origin is one that is always urged by a certain class in such outbreaks, viz., that there is no evidence of its importation.

Negative proof of this sort is proverbially weak and unreliable, and the fact that the Commission which visited Damietta in the midst of the panic of the first few days after the announcement of the presence of the disease, found, during the two days of its stay, no evidence of importation, is almost without significance. It would have been strange indeed, under the circumstances, had they found such evidence. At present the flame of the epidemic is burning lower, in some places for want of susceptible material, in others because of isolation and disinfection of the first cases, or because of some peculiarity in the local and atmospheric conditions.

To conclude from this state of things, however, that the danger is less, or has disappeared, is foolish. We have previously stated that it is improbable that cholera will reach the United States this year, but that it is an even chance that we shall have it next year. Since that opinion was published the danger has diminished very little, if any, and while there is not the slightest occasion for panic, there is very urgent need of enforcing cleanliness, of looking to the purity of water supply, and of great care in the administration of our quarantine stations.

HAY FEVER.

ALTHOUGH our title is a misnomer, the disease is a reality, and one which calls for careful study in view of the apparently ever-increasing frequency of cases of the disorder. Some years since, Dr. Wyman, of Boston, who has published by far the best book upon the subject, essayed a more definite and scientific appellative, and, were it not for the fact that very many cases appear in the early summer, "autumnal catarrh" would be the most appropriate title. But, as a matter of fact, many cases occur in the month of June, and some few have been observed by the late Dr. Beard in July, so that, to include all cases, the title of "Periodical Catarrh" would be perhaps best, and certainly most accurate. It may be, however, that, as in many other affections, usage will continue to apply the title whose only claim lies in antiquity, and that as many of us insist upon calling enteric fever typhoid, we shall continue to speak of hay fever, because it occurs at the time of hay harvest in England, and prevails at the same time, but long after that harvest is ended in America.

One thing is, however, certain, that there is an increasing number of persons who at one stated season of the year, somewhere between June 1st and October 1st, suffer from catarrhal attacks of greater or less severity, from which they are generally free at other seasons. In a large majority of cases the catarrhal symptoms are confined to the nasal and conjunctival mucous membrane, but in a considerable number there is a development of bronchitis with more or less well-marked asthmatic symptoms. Starting with the conjunctiva, and extending to the minute bronchial tubes, all the intervening mucous membrane is liable to attack, and the gravity of the symptoms of the disorder are in pretty exact accordance with the amount of mucous membrane involved.

But our object is not to write a treatise upon an affection notoriously unamenable to medical treatment, but merely to comment upon one or two curious, and as yet not satisfactorily explained, peculiarities connected with it.

One of these is the very evident increase in the number of cases. Further than the fact that, owing to the efforts of the United States Hay-fever Association, the disease escapes classification as an ordinary cold, and is recognized by the single element of its periodicity, there does not seem to be any sufficient reason for this increase. For while the affection attacks principally those well-to-do in life, there are numerous exceptions to the rule; and while many of those who suffer from it belong to the category of nervous individuals, very many others would never be classed as such, and but few give evidence of being the subjects of suppressed gout.

Quite recently, Dr. Harrison Allen and others have noticed a peculiarity in the anatomical position and shape of the inferior turbinated bone, which, to say the least, is frequently associated with autumnal catarrh; but such a peculiarity can in no way account for the periodical character of the affection.

So far as the present state of our knowledge extends, we are compelled to fall back upon that most unsatisfactory and shadowy cause—idiosyncrasy—acted upon by the inferred influence of vegetable matter. Attempts have been made by Blackley, Marsh, and others to fix upon certain particular pollens, as those of the grasses, maize, and ragweed, as the especially exciting cause; but it would rather seem that many varieties of vegetable dust are equally efficient. We are not aware of any observations which have connected the affection with bacteria; nor can we reasonably hope for any solution of the problem which neglects the *seasonable* existence of the exciting cause, although it can be readily seen that the idiosyncratic susceptibility to that cause may be anatomical.

While remedial measures can do much to alleviate the severity of the disorder, it is becoming pretty well understood that a cure can only be obtained by a flight to one of the localities which experience shows to enjoy exemption from the presence of the exciting cause. These localities are quite numerous, and are being annually resorted to by large numbers. The Hay-fever Association has published a large list of such places, and has placed its estimate upon their respective value, but these estimates are principally based upon lay opinion, and are subject to some qualification on the score of inaccurate observation. There seems to be no doubt that at some high elevations, and some low ones, relief is obtained. The essential point would seem to be absence of much upland vegetation. Thus it is that some portions of the White Mountains, and certain seashore resorts situated upon sandy islands entirely surrounded by water, as Fire Island, New York, and Beach Haven, New Jersey, have acquired their reputations, while many others upon the Association's list are probably of equal value. There is little or no doubt that upon the ocean itself the exemption is most perfect. Whichever locality is selected, it is important that the patient should go there early, if possible, before the beginning of the attack, and that a quiet and prudential life should be led.

Observation would seem to show that those who suffer most at home are best satisfied with the measure of relief obtained, although the actual exemption is more perfect in those who merely suffer from an annoying coryza and irritating cough at home. Experience would also seem to show that in some cases, at least, the regular and systematic resort to one of the favorable localities is attended with increasing benefit, although there appears to be no evidence that the tendency will ever entirely die out in adults. In children, it would seem to be most important that every effort should be made to keep the disorder in abeyance, by sending them early and regularly to a suitable location, in the hope that the habit of system may not become ineradicable, but may disappear before the advent of adult life.

THE COLLECTIVE INVESTIGATION OF DISEASE IN ENGLAND AND AMERICA.

The idea of collecting, combining, and analyzing the experience of a large number of those physicians who are engaged in general practice, is not by any means a new one; but until quite recently no definite, well organized attempt has been made to carry it into effect.

Individual efforts have been made here and there to obtain such information by means of circulars containing lists of questions, and when the querist has been a man well known to, and respected by the profession, some interesting results have been obtained in this way.

The organization of the Collective Investigation Committee of the British Medical Association marks a step in advance in this direction, and now that this Committee has proposed to the American Medical Association to join in the work, some account of the organization and methods of the English Committee may be of interest.

The matter was under discussion in the British Association for two years before the present organization was completed and work fairly commenced. The Collective Investigation Committee is a Committee of the general Association, and is charged with the duty of selecting the subjects to be investigated, and of preparing the questions to be sent out. The formulating these questions is one of the great difficulties in the work; it can only be done successfully by those who are fully conversant with all that is known with regard to the subject under consideration, and who can indicate briefly and clearly those points which are still doubtful or unknown, but which it is fairly probable may be settled if the attention of a large number of practitioners be called to them, and the results of their observations are collected, compared, and properly analyzed.

The method adopted by the Committee is to prepare, or have prepared by experts, a memorandum on the subject of inquiry, giving as briefly as possible the state of existing knowledge with regard to it, and to issue with this a card containing the questions to be answered.

For example, the memorandum on acute pneumonia, explains that the special point to be investigated is that of its etiology, and more particularly as to what grounds there are for supposing that it may sometimes, or often, or usually, be due to infection or to some more or less specific septic influence. It then goes on to explain the purpose of the individual questions, and the points to be kept in view in answering them. The card issued with this memorandum is accompanied with a specimen of a "filled up" card. It asks for the initials of the patient, the sex, age, occupation, conjugal condition, whether temperate, food; residence, whether high or low, etc.; atmospheric conditions; number of cases of the disease in the same house—in the same district; sanitary conditions of house and district; family history of lung disease, etc.

The memoranda and cards thus far issued relate to diphtheria, chorea, rheumatism, pneumonia, and syphilis, and while of unequal merit are nevertheless all good, and well calculated to produce good results.

Turning now to the machinery for placing these cards in proper hands, we find that this is done to a great extent by local committees of the various local, or, as they are called in England, "Branch" Associations.

The appeal of the general Committee for the formation of these local Committees sets forth the importance of the work, pointing out that a large part of our present knowledge of disease is derived from hospital practice in which little or no opportunity occurs for the observation of the conditions which precede established organic disease. It explains also the failure of previous efforts as due to the circulation of questions requiring complex and elaborate answers, usually relating to past and unrecorded experiences, and to the want of general interest in the subject.

At the recent meeting of the American Medical Association in Cleveland, Dr. Billings presented communications received from Dr. F. A. Mahomed, the Secretary of the General Committee of the British Association, inviting coöperation on the part of American physicians, and expressing a hope that this coöperation might be furnished in an organized and systematic way through a Committee of our own Association. The papers were referred to the Standing Committee of the American Medical Association, which is charged with the investigation of the relations of disease to climatic conditions, of which Committee Dr. N. S. Davis is chairman, and they will, no doubt, receive due consideration.

The advantages of extending the field of observation and inquiry over this country are sufficiently obvious, and it is a happy thought to provide objects of a common interest for the two Associations which will tend to bring the physicians of the two great English-speaking nations of the earth into closer relations with each other. The problems of English physicians are, to a great extent, our own problems also, and we can, no doubt, both help and be helped in this matter.

The English Committee already find the material which they have collected so abundant that they propose to publish it in the form of a semi-annual record. Perhaps this record may become a truly international one. No doubt there are some rather special difficulties in the way, but we think all these can be overcome by tact and perseverance. After all it is but the extension of the principle of association, and division of labor, which has in other fields produced such excellent results, and we hope that the Committee of the American Medical Association which now has the matter in charge, will be able to agree upon some plan which will be a practical acceptance of the invitation of the British Committee.

In the words of Sir William Gull, "This is the age of combinations, but there is none which has a better objeet than this; for what can surpass that whose purpose is the investigation of truth for the good of man?"

"MY ASYLUM LIFE."

Our attention has been attracted by an article in *Lippincott's Magazine* for July, 1883, entitled "My Asylum Life, by a physician." It purports to be an autobiographical account of a case of insanity, with criticisms on asylum management. Either it is fiction, written by a practised hand, in order thus artfully to attack the system pursued in asylums, or it is a true story. In either case, it is of interest to the physician, since even if it be untrue as a personal narrative, it exhibits a curious knowledge of the routine of life in hospitals for the insane, and would be, in any point of view, worth considering by those who have charge of them. On the whole, after carefully examining the evidence afforded by the narrative, we are inclined to believe it fictitious, although as to this there is and will be some difference of opinion.

The case is described as a rare example of double self-consciousness, involving, finally, when at the worst, a belief in the fact that the patient was himself and also Satan. As a statement of his own case by a recovered patient, the continuity of the psychological history and the accuracy with which, after years have passed, conversations are related, make rather too heavy a tax on our faith. At the same time, the analytic study of the case in its symptoms and the story of the rise and progress of a despotic belief in a delusion incline us to believe that in some sense the account is true, and that whoever wrote it must be much in contact with the insane.

In the patient's distress, he consults at least two physicians, and, of course, as a doctor, comments sharply on their views and manner. It is at the close of one of these interviews that his "Satan-self" threatens to infest him with other devils, on which the patient, in a moment of clearness, reflects that, although double personality is well known, for a man to regard himself as more than two persons is an unknown case, and, therefore, not to be feared. We should like to know if this be so.

The idea that "Sleep is a widely illustrated insane asylum" is scarcely new, and is, perhaps, rather too fanciful. But however curious may be the psychological study with its points of harmony and grim description of "pure terror" as a possible mental condition—a part of the case quite too dramatic in its presentation—the practical value of the article must lie if anywhere in its hints as to the evils and difficulties of asylum life.

The sharp comment on the failure of intelligent study and tactful treatment of cases during the first day or two after admission struck us, as well as the complaint as to the general incredulity in regard to the statements of those once insane, a point, we fear, but too well taken. We were impressed, too, by the remarks on the fact that the asylum doctor habitually believes asylums the place for all insane people, and that, in proof of this, we see no statements in their returns of releases within a day or two after admission of those whom they feel were best treated outside of stone walls.

The further comments on the diet, on the want of trained male nurses, on the insufficiency of medical care, the neglect of thephysical ailments of the lunatic, on the horrors of the lock and bar system, and the reasons for the frequent failure of asylums to secure the highest medical skill, are all alike the more valuable because of a certain charitable calmness with which the charges are made, while the pitiless sarcasm on the managers of asylums, and on the prevalent methods of inspection, might lead us back to the belief entertained by many in regard to this paper that it must have been written by one whose statements were emphasized by personal suffering.

But whether a sad and true story or a clever assault on asylum management in the guise of a fictitious sketch, it cannot fail to suggest how great would be the interest of a volume of autobiographical statements of cases of insanity, nor to awaken afresh the question as to whether the general medical opinion is correct in its belief that there is still much to amend in our care of the insane.

THE RIGHT OF AN AUTHOR'S OWNERSHIP IN HIS LECTURES TO BE VINDICATED.

Three weeks ago we published letters from Drs. Alfred Stillé and Hayes Agnew, denouncing as fraudulent *An Epitome of Medicine and Surgery*, published in this city by Samuel M. Miller, M.D., and purporting to be by them. We now learn that, upon their affidavits that the publication is unauthorized by them, the Court has just granted a preliminary injunction restraining the circulation and sale of this book. At the hearing, it is expected that the Court will give equitable relief to Drs. Stillé and Agnew by granting a perpetual injunction and damages.

Authors have been imposed upon so long by the unauthorized and even fraudulent publication of their lectures, that they finally began to believe that they had no right of property in them which piratical publishers were bound to respect, and these publishers in turn, in the absence of protests, gradually began to think that this apparent view must be practically correct. In the present case flagrant injustice has been done Drs. Stillé and Agnew, whose lectures have been stolen, for they are made to masquerade before the profession as authors of a treatise which they never wrote, and which they indignantly repudiate, and the case is particularly aggravated by the fact that Dr. Miller took out a copyright on the book without apparently the slightest shadow of authority.

We are very glad to learn that the common-law right of an author's ownership in his lectures is soon to be again vindicated in our courts, and we trust that this will stimulate our clinical lecturers to stop the publication of unauthorized reports of their lectures, which, by reason of the frequent errors and gross inaccuracies, have proved as great a fraud upon the reader as they were upon the rights and reputation of the authors.

In this connection, it affords us no little satisfaction to state that The Medical News has always acted in accordance with the view, which, over and again, has received judicial sanction, and that the lectures which have appeared in our columns have always been authorized publications, made by or with the express permission of their authors, and their right of ownership protected as well as acknowledged by the tender of pecuniary compensation.

PHENIC CAMPHOR IN THE TREATMENT OF ATAXIC TYPHOID.

Under this title, a French army surgeon, Dr. Amat, addresses a note to the editor of the *Bulletin Général de Thérapeutique* of a recent issue. His object is to inform the medical profession of the good results obtained from the administration of phenic camphor in low cases of typhoid fever. What is phenic camphor? When carbolic acid and camphor are rubbed up together with alcohol and water, a mixture results. The exact proportions recommended by Dr. Amat are the following: Camphor, 5 grammes (about 80 grains); crystallized carbolic acid, 2½ grammes (about 38 grains); alcohol, 150 grammes (about 5 ozs.); and water, 850 grammes (about 27¼ ozs.). This prescription is used by the stomach and rectum, and is reserved for the cases characterized by great depression, with nervous excitement. It is presented to our readers with the view that such a combination may offer some advantages in the class of cases above referred to.

SOCIETY PROCEEDINGS.

BRITISH MEDICAL ASSOCIATION.

Thirty-first Annual Meeting, held at Liverpool, July 31 and August 1 and 2, 1883.

Tuesday, July 31. Morning Session.

The fifty-first annual meeting of the British Medical Association was held at Liverpool on July 31st, August 1st, 2d, and 3d, under the presidency of Dr. A. T. H. Waters, of Liverpool.

Mr. Wheelhouse presented the

REPORT OF COUNCIL,

from which it appeared that the total number of members on the register on July 1st was 10,150. The revenue of the Association for the year was £19,076, and the expenditure and loss were £16,288, leaving a surplus of £2,788. The invested funds, exclusive of trust funds, amount to £13,267.

The Association then proceeded to the consideration of new by-laws, after which it adjourned.

Evening Session.

The members reassembled in the evening, when the President announced that the meeting was honored by the presence of several distinguished foreigners, amongst whom were Drs. Austin Flint, F. S. Dennis, and George M. Lefferts, of New York; Prof. Snellen, of Utrecht, and Prof. Tilanus, of Amsterdam.

The President, Dr. A. T. H. Waters, then delivered his

ANNUAL ADDRESS,

choosing for his subject the "Present Aspect and Future Prospects of Medicine."

He said: In considering the standpoint of medicine, we should always bear in mind that medicine must be judged by the therapeutic results which it achieves, and in proportion as we can show that the researches of the physiologist, the pathologist, and the chemist, and the application of scientific principles, have enabled the physician to deal more successfully with disease, to anticipate its development, to recognize its earliest symptoms, to mitigate its severity, and reduce its rate of mortality, so do we establish for our art a claim on the confidence and gratitude of mankind, and in this respect the present state of medicine shows no slight advance on the past, and promises a more rapid progress in the future. The past five and twenty or thirty years—not to go further back—have been marked by the general development of views with reference to many diseases, such as have largely and beneficially influenced our treatment of them. With regard to the affection which we term pneumonia, have we not seen the introduction into practice of a mode of treatment which has deprived the disease of much of its terror, and greatly reduces its mortality? Whatever be the views which we entertain of the nature of pneumonia, the important fact remains that we may enumerate amongst the successes of medicine of the present day, a large reduction in the mortality from the affection.

Again, the recent development of the practice of tapping the chest in pleuritic effusion—an operation comparatively rarely performed thirty years ago—is, in my opinion, a very marked improvement in therapeutics. Those who have carefully watched the progress of medicine in this matter, know full well how great have been the changes which have taken place within the last quarter of a century, and especially since the introduction of the aspirator. It is impossible to refer to all those to whom we are indebted with reference to this subject, but Trousseau as a pioneer, and Bowditch, whose large experience and satisfactory results exercised so beneficial an influence, I must not pass over, whilst there are many in this country to whom we owe no less a debt of gratitude. There is, perhaps, from the facility with which tapping may be performed, and the almost entire absence of risk when it is properly performed, a fear that it may sometimes be resorted to unnecessarily. But, from what I may term a somewhat large experience in the operation, I can speak with confidence of its value and safety in both acute and chronic effusions, and I cannot but think that, as the result of the early performance of the operation, we shall see, every year, fewer of those cases of deformed chest which so frequently follow neglected pleuritic effusion.

It is impossible to enumerate the various affections in which there is a marked improvement in treatment, and those which I have referred to must be considered simply as illustrations of my position; but whilst I speak with satisfaction on this subject, I must not forget to mention that, in the midst of many successes, we have instances of, I will not say actual, but comparative, failure. Our knowledge of the pathology of some affections remains very imperfect, and our therapeutics are in some respects very unsatisfactory. Although rheumatic fever is one of the most common diseases, it must be confessed that we are ignorant of its pathology. During the past few years there has been introduced into practice a mode of treating the disease by the compounds of salicylic acid, which has met with general adoption, and has been largely successful. I can add the testimony of my experience in its favor; but still, with all the opportunities which we possess of studying the affection, we are as yet unable to give any satisfactory explanation of its essential nature. But, gentlemen, of all the questions which now engage the attention of the pathologist and physician, there is no one which surpasses in importance that which relates to the dependence of certain diseases on micro-organisms. The subject is one of the greatest possible interest, and fraught with bearings of a practical character which already have had, and are doubtless destined still further to have, a vast influence on the prevention and treatment of disease. The establishment of the fact that pebrine, chicken-cholera, and splenic fever depend on the presence of specific microbes, and that relapsing fever has associated with it, if not indeed causing it, a like organism must be classed amongst the most striking discoveries of the present day, and undoubtedly mark an epoch in the history of pathological science; whilst the gradually accumulating evidence that tuberculosis is the result of a parasitic element seems likely to lead to its being placed in the same category as those affections the pathology of which appears now to be clearly established. Moreover, the brilliant results which have followed the process of attenuative culture of the virus of some of the affections to which I have referred, and the protective influence of vaccination by these attenuated fluids, as carried out by Pasteur, lead us to hope that, by further researches in the same direction, we may yet discover some means for checking the ravages of tuberculosis and other allied diseases, as certainly as the great discovery of Jenner has enabled us to check the ravages of smallpox.

Of the many problems which await solution in connection with the subject which I have just considered, no one is more pressing than that of the dependence, or otherwise, of pulmonary consumption on the bacillus which has been so largely found, not only in the morbid deposits which result from the disease, but in the expectoration of phthisical patients. Should it be found that in all cases of genuine tubercular phthisis the bacillus tuberculosis is present, and should future researches show that the disease is caused by the parasite, a solidity will be given to the pathology of the affection, and perhaps the therapeutics of it will be materially aided. Speaking from clinical experience, I cannot but conclude that the disease to which we give the name of phthisis has more than one mode of origin. Further investigation will perhaps clear up the doubt which exists on this point; and here I should like to observe that there are some affections of the lungs which closely resemble, in their clinical features, acute phthisis, and yet which, under careful treatment, do not go on to a fatal issue. Of such cases I have now seen several. Their general symptoms, their physical signs, their temperature-ranges, made me conclude that I had to deal with cases of acute pulmonary tuberculosis, and I have expected a fatal result, but recovery has taken place. These cases occurred before attention was directed to the presence of bacilli in the sputum of phthisical patients, and no examination of this secretion was made. In instances of a similar kind, we shall now be able to use this method of investigation, and possibly it will afford a valuable means of differential diagnosis, and enable us to give, in cases where the bacilli are absent, a more favorable prognosis than the general symptoms would otherwise warrant. I may say, in regard to the cases to which I have referred, that they were treated by free nutrition. the administration of quinine, and a somewhat liberal quantity of alcoholic stimulants.

The great point which remains to be decided, and which I hope the discussions which will take place at this meeting will help to decide, is whether the so-called bacillus tuberculosis is the cause or the consequence of the tuberculous disease.

Wednesday, August 1st.

The President of Council stated that a cordial invitation had been received to hold the next meeting of the Association in Belfast, and he moved that the invitation be accepted, and that Dr. Cuming of Belfast be appointed President-elect. Unanimously adopted.

Mr. Reginald Harrison then delivered the

ADDRESS IN SURGERY.

After expressing his high appreciation of the honor conferred on him, he referred to the surgical traditions of Liverpool, and then dwelt upon some of the more recent advances and work in connection with the surgery of the urinary organs.

He said, commencing with the kidneys, we are at once struck with what surgery is doing for them. Until quite recently the diseases of these organs were regarded as belonging almost exclusively to the province of the physician, and probably they would have remained so had preventive medicine obtained fuller development.

A more extended acquaintance with the pathology of the kidney has brought to light conditions in which the work of the physician requires to be supplemented by that of the surgeon. Pain arising from an undue mobility of the organ, tumors, deposits, hemorrhages, and collections of fluid within it—all these morbid states are now recognized as capable of relief or cure by fixing, opening, or extirpating the abnormal or disordered organ; whilst numerous illustrations have already been afforded of the successful removal of stones from positions where they must have ultimately led to the disorganization of the kidney in which they had become impacted.

It would be premature at present to endeavor to formulate anything like precise rules in reference to the application of the various operations on the kidney to which I have briefly referred; they are at present comparatively new to us, and we must occupy ourselves in cautiously moving in the direction they indicate, and in collecting experience rather than in drawing conclusions other than very general ones.

Amongst many valuable contributions to the literature of this subject which have appeared, I would include one by Dr. R. P. Harris, of Philadelphia, which contains an analysis of one hundred cases of nephrectomy. From this, as well as other communications which have more recently been published in this country, we may draw at least three conclusions of value, so far as the operation of extirpation of the kidney is concerned. These are:

1. That nephrectomy has been the means of saving many lives under circumstances where no other method of treatment was likely to be of service;

2. That this operation has been practised in cases where the probability of a successful termination appeared to be very remote; and

3. That a method of effecting the removal of the organ different from that which was selected, or a procedure less heroic, might, in some instances, have tended to increase the chances of success.

In these directions then—in selecting cases for operation, in rejecting others as unsuitable, and in determining relatively to the case in question the best method of procedure—I take it that good work has yet to be done.

It appears to me that among the difficulties we have to contend with in the application of nephrectomy, two stand out prominently: (1) The kidney it is proposed to remove may be the only one; (2) the opposite organ may be similarly affected, though in a less degree, yet sufficient to interfere with those compensatory changes being carried out which are essential when one excretory organ has to supply a lack of service on the part of another. The literature of this subject will already be found to illustrate the class of difficulties to which I am referring.

Till a few years since, the removal of stone from the bladder by crushing had been conducted on the lines laid down by Civiale some half-century ago. Though this method of proceeding has included amongst its advocates, past and present, surgeons of eminence, it cannot be said that, as then practised, it was either gaining ground or confidence. Indeed, I think I may say there was an increasing tendency to limit its application, and to substitute lithotomy in all cases but those of the simplest kind. The mortality consequent upon retention of broken calculi within the bladder was sufficient to induce all but the most ardent admirers of lithotrity to hesitate to give it the preference over a proceeding in which, whatever might be the risks, there was at least a guarantee that the whole of the stone had been removed.

Whilst the surgical mind was thus to some extent in doubt as to the limits to which the crushing operation of stone might safely be pushed, two important communications followed rapidly upon each other. That both of them should have emanated from America merely indicates that the desire to advance the art of surgery is not limited to the old country, but is a natural outcome of advancing civilization and humanity.

The first of these papers was by Dr. Otis, of New York, who demonstrated beyond all reasonable doubt, and in a manner which had not previously been attempted, that the male urethra was capable of safely receiving far larger instruments than were generally employed. Following upon this, and probably influencing the views of the author, came Dr. Bigelow's paper on the removal of stone from the bladder by crushing, and withdrawing it at a single operation; the latter communication clearly showing that the bladder was tolerant of much more prolonged manipulation than had previously been believed.

It appears to me that the originality of Bigelow in no way detracted from the importance of the work that had previously been done in this country and elsewhere, or compromised the acumen of those who were most interested in the progress of this department of surgery.

Passing to tumors of the bladder, it is not surprising, seeing what has been done for tumors of the ovaries, uterus, and intestines, by Sir Spencer Wells, Keith, Lawson Tait, Treves, and others, that growths occupying the interior of the bladder should have received special attention. Though the literature relating to this subject has been of a somewhat fragmentary character, such compilations as Stein's recent work, *A Study of Tumors of the Bladder*, conclusively show that some gratifying results have already been attained in both sexes. The great distress connected with this class of growths, the uncertainty as to the precise nature of the affection, in the first instance, and subsequently the kind of symptoms that accompany it have naturally suggested the employment of means having for their object their removal by operation.

Sir Henry Thompson has done good service in giving prominence to the employment of digital exploration of the bladder, and in furnishing illustrations of the great advantage that this proceeding is capable of affording in suitable cases.

From a consideration of some of the extremely valuable records which have been published by various surgeons, where the bladder has been opened for the removal of tumors, it appears to me that it might have been better had the operative proceeding terminated with the detection and exploration of the growth by the finger. The chief dangers which experience has shown to be liable to attend the performance of this class of operations are:

1. The chance of rupturing a bladder, the coats of which have been rendered less resisting than natural.
2. The provocation of a hemorrhage which it has been found difficult to control.
3. An incomplete removal of the growth.

On the other hand, an examination of many tumors of this kind, of which villous growths or tufts furnish the best examples, shows that there is nothing in their connections or relations which need necessarily interfere with their complete removal. Precise information as to the presence and attachments of these growths we may now obtain with comparative safety. Whether their removal is to follow upon their discovery will be matter for further consideration.

It appears to me that enlargement of the prostate is specially interesting to us in relation to its earliest and to its most advanced forms, and it is to these points that I shall more directly refer.

I have long been led to believe that our treatment of prostatic stricture—or by whatever name we know it—commences, as a rule, far too late; we delay until the bladder shows, by the formation of a pouch, or a saccule, behind the prostate, the first bad influence of back-pressure before we seek to rectify it.

I have endeavored to prove how much good may be done by the adoption of judicious mechanical treatment on the appearance of indications that the prostate is commencing to obstruct micturition, and I have founded my suggestion upon a condition which may be seen illustrated in any museum, viz., one in which, though the gland has become large, obstruction has not been known to occur. An extended adoption of this practice has convinced me that the pressing symptoms connected with an enlarging prostate may be kept in abeyance by the timely employment of those principles of treatment which are generally recognized as being applicable to any tubes within the body which are threatened with occlusion, and are within our reach.

In the more advanced forms of prostatic enlargement, where the bladder has been converted into a receptacle little better than a chronic abscess in which urine stagnates, surgery has done much to afford relief.

When the comfort that catheterism is capable of affording has ceased to be effectual, other plans of establishing a drain for the urine are at our disposal. It is not necessary that I should discuss the various means of effecting this; let me, however, say a few words in reference to two which have more recently come under notice: these are—first, incision into the bladder from the perineum; and, secondly, paracentesis through the enlarged gland.

For the purpose of securing a more or less permanent channel for the escape of urine from the bladder, other than by the urethra, I must admit that, following the practice of Syme, and to some extent of Edward Cock, I have a decided preference for an incision through the perineum, on the twofold ground of safety and comfort. We have had numerous examples of the great benefit that cystotomy is capable of affording for bladder affection dependent on a large prostate, none perhaps more striking than the case narrated by Mr. Lund, on the memorable occasion of the meeting in London of the International Medical Congress. The paper closes with this observation: "I have thus placed on record this case, unique in its character, and interesting and encouraging in its results, with the hope that should a similar case occur to any surgeon now present, he will not hesitate to give his patient the chance of benefit from a course of procedure so simple in its nature, and so likely to be followed by temporary, if not permanent, benefit."[1]

I may be permitted here to submit to your notice a method of puncturing the bladder through the enlarged prostate which has afforded very gratifying results. It consists in passing the trocar through the gland, and retaining it in the perineum, so as to afford a permanent as well as a convenient drain for the urine. I should have had more diffidence in commending this operation to your notice, had it not received the approval of our distinguished Associate, Prof. Gross, whose contributions to the surgery of the urinary organs are held in deservedly high repute on both sides of the Atlantic.

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[1] Trans. International Medical Congress, vol. ii.

Though the primary object of cystotomy, as usually practised, is merely to place the bladder at rest by providing a continuous drain for the urine as well as the products of cystitis, it occurred to me, as it had already done to others, that it would be possible to extend this proceeding, with the view of removing those barriers to micturition which the hypertrophied gland so frequently presents.

It was to meet conditions such as these that Mercier introduced and practised division of the prostatic bar by means of a cutting instrument introduced along the urethra. This plan, though admirable in its conception, was open to the objection that in its execution it was necessarily uncertain, there being no means of surely ascertaining that the section was confined to the obstruction to be removed. On carefully considering the position of matters, as well as the proposals that had been made, it appeared to me more reasonable to attempt to divide the prostatic obstruction at the neck of the bladder from an opening made into the membranous urethra, than by means of instruments which had to traverse the whole length of the canal. I have recently brought under notice a case[1] in which I thought it desirable to explore the prostatic urethra from an opening made in the perineum, and through which I was enabled to divide, with precision, a prostatic barrier. The division of this portion of the gland was followed by complete restoration of the power of micturition, and has so far proved of permanent advantage.

The proceeding which I have thus put into practice seems first to have suggested itself to Mr. Guthrie, but I cannot find that he ever employed it. That it is not identical with the somewhat extensive incision of the prostate as for lateral lithotomy, which was practised by Sir William Blizard, is at once obvious. Its aim is to divide the obstruction—and the obstruction alone—by an opening so planned as not to expose the patient to undue risk, whilst, at the same time, it is capable of affording the greatest amount of room for manipulation by an extension of the incision, should this be found to be necessary.

I need hardly observe that a proceeding of this kind should be undertaken before the bladder has passed into a condition of confirmed and irremediable atrophy, otherwise, though we may succeed in removing an obstacle to the introduction of the catheter, our prospect of restoring the power of micturition will be as hopeless as it has proved to be under somewhat similar circumstances, where the operation of lithotomy has been undertaken.

It is impossible to avoid the conclusion, from their examination after death, that many atonied bladders might have been prevented becoming so by the timely removal of the obstruction by which a condition of permanent paralysis was induced and maintained.

The operative treatment of the enlarged prostate, when it obstructs micturition to a degree that cannot be met by judicious catheterism, is yet, I believe, open to considerable improvement.

Though the literature relating to either complete or partial excision of the prostate is very limited, there is much in it of promise. In one case, where I extirpated the whole gland for malignant disease, the benefit that followed far exceeded my expectations. It was that of a middle-aged man who, by reason of a carcinomatous prostate, was threatened with a speedy and painful death. I cut down upon the gland in the median line, and succeeded in enucleating it tolerably clean with my finger. I saw this patient eight months afterwards in very fair health, and quite able to go about his business. So far he has enjoyed an immunity from the symptoms which induced me to perform this operation, and though his disease is a malignant one, we have every reason to be content with the results obtained.

Then we have numerous examples where considerable masses of the prostate have been removed with very great advantage, in the course of operations on the bladder. Amongst these I would specially mention an important case by Mr. Bickersteth, and, more recently, another by Dr. John Ashhurst, of Philadelphia, in which the whole of an enlarged third lobe was successfully removed.

Cases such as these seem to favor the hope that operative surgery will be found capable of affording more relief to exceptional instances of this kind, and of extending to the large prostate the treatment which, in some degree, is applicable to other deep-seated growths.

In opening the Section of Obstetric Medicine **DR. GRAILY HEWITT** said: I take advantage of this opportunity to present a few observations on the question of food in obstetric and gynæcological practice.

There are certain terms in general use by the public, and by the profession, which are often employed in a vague, unmeaning, and indefinite manner—such as "weakness," "delicacy," etc.—whereby it is intended to designate a condition very frequently met with, but the essential nature of which is, as my experience has shown me, very imperfectly apprehended.

Another conclusion is, that the "weakness" is associated with and caused by a long-continued inadequate dietary, and that it is essentially what may be termed "chronic starvation." The rational view of the matter is, that this "weakness" is in the very large majority of cases preventable; that it should be regarded as the first stage of a serious possible disease; that it is mostly the result of chronic starvation, that it is curable, to a greater or less degree, in most cases, and that it is of the highest importance that it should be formally and carefully treated, as other diseases are, instead of being allowed to smoulder on until the constitution is thoroughly undermined, or until some ailment distinctly classified in our nosology makes its appearance.

It is a remarkable circumstance that so little as yet seems to have been done in the investigation of the effects of an insufficient dietary, looking at it from the quantitative point of view, although the effects of complete deprivation of food are well known. The popular impression is, that some people do not require so much food as others, and consequently, important diminution in the supply often escapes attention. I have to state the important conclusion, that a continuous insufficiency of food, or what may be termed a "chronic starvation," more or less intense in different cases, was found to have existed almost universally. Consequently, I have naturally been led to consider chronic starvation as a most important factor in disease, certainly in those classes of cases which have come more particularly under my notice.

It will be well to cite a few typical instances:

1. A young married lady, aged 24, consulted me for a severe retroflexion of the uterus, which appeared to have set in shortly after her first labor, some months previously. She underwent treatment for this affec-

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[1] British Medical Journal, June 9, 1883.

[1] Trans. Royal Med.-Chir. Society, 1882.

tion; and, in the course of it, one day her mother came with her, and inquired of me why it was that her daughter had become liable to this affection. I replied that, in all probability, it was due to a previous condition of weakness, and insufficiency of meat as an article of food. "Yes," said the patient, "that is very likely true; for when I married, and could please myself, being very fond of sweets, I took little ordinary food during the first year, but lived chiefly on sweets, and ate little or no meat at all."

2. A young lady, aged 18, suffered much from menorrhagia, and her condition became finally one of complete inability for exertion. It was ascertained that this patient had lived regularly as regards her diet, but that her diet consisted principally of bread and puddings; and, having a marked aversion to meat, she had taken very little for two or three years previously; and it is the fact that I was afterwards consulted by two of her sisters presenting uterine symptoms, and with a corresponding history as regards the previous dietary.

3. Again, a young lady of very active habits, but who hardly ever took meat, became very ill after an unusual exertion, was affected with severe sickness, which went on unchecked for nearly a year, and was finally so ill that her life was despaired of. Here, the previous dietetic deficiency was most marked. The patient was finally completely cured, the sickness being found to be a reflex symptom dependent on a uterine displacement.

These cases might be multiplied *ad infinitum*.

I have been much interested in observing, also, the effects of previous insufficiency of food in apparently predisposing patients to attacks of puerperal septicæmia. In the cases of this disease which I have seen in consultation, I hardly recollect having seen a case where the patient so affected had, during the pregnancy, lived fairly well; and the worst cases have been those in which the patients fed badly and insufficiently during the pregnancy, and had been fed on a gruel diet after the labor was over. In cases where severe sickness during the early part of the pregnancy prevents the proper nutrition of the patient, the system is liable to become much impoverished, and an insufficient dietary may be, and often is, the preliminary to a dangerous childbed.

With very few exceptions, and those exceptions only tending to prove the rule, it is, I hold, impossible to find patients suffering from chronic uterine disease, who have not undergone, at some former period, what may be termed a starvation process, and careful inquiry generally elicits the fact that the quantitative deficiency in the diet extended over a considerable period. In many cases, the patients are found to be still under the influence of a deficiency in this direction, and to be "eating," as the expression is, "next to nothing."

The period of life during which quantitative deficiencies in the dietary are most common, is the two or three years immediately following the arrival of puberty. The girl is at school probably, her appetite is bad, or the food is not palatable, or is deficient in important particulars, or, as I have found in some cases, she eats little in order to keep thin; the strength fails, the appetite diminishes, and a habit of taking little is formed—particularly little animal food is taken. Three or four years of the most critical stages of life are thus passed, a time at which the body should be growing fast, and to maintain this growth in adequate vigor large supplies of nutritious material are required, instead of which the supply is far below the normal standard. The result is a general impairment of vigor and of vital action. On the generative organs, the effect is, as I have observed in numbers of cases, most decidedly injurious; and the effect, in most instances, is of this kind, that the tissues of the uterus lose their normal firm healthy consistence. The further result is that the pelvic organs as a whole, but particularly the uterus, undergo a subsidence in the pelvis; the uterus becomes liable to change of shape, and other alterations, more or less marked, in different cases. Slight exertions, slight accidents, or even moderate exercise, are, under these circumstances, liable to act most prejudicially on the softened and weakened contents of the pelvis. This is a faithful description of what I have observed to occur in very many cases. I refrain from pursuing the further history of patients so affected, as not falling within the scope of these remarks.

It is generally admitted by authorities on the subject of diet that nitrogen is the most essential of all foods, and that a certain amount, about three hundred grains, should be taken daily. In cases of chronic insufficiency of food, it appears that the diminution in quantity of food most frequently affects the nitrogen. Meat is the article of diet which, as a rule, is the source of the greater part of the needed amount of nitrogen. Milk is, of course, a most valuable alternative food; but, in these cases of absence of sufficient meat, we do not find it has ever been taken in any such quantity as to make up for the deficiency; and the quantity of bread consumed, even supposing it to be pure and of good quality, is in such cases entirely inadequate to supply the required quantity of nitrogen. I need not allude to the effect of deficiency in the other constituents of the diet. It is sufficient for my present purpose to show that the nitrogenous elements, while they are of all the most important, are those which are markedly absent in the cases now under consideration.

There are few observations bearing on the subject now under discussion which can be quoted from published works. Professor Voit (*Untersuchung. der Kost*, Munich, 1877) mentions an interesting fact. In a public institution, a home for girls, in which, he reports, the diet included an average quantity of one hundred and seventy grains of nitrogen only, the girls appeared healthy, but their muscles were found to be weak, and menstruation was found to be delayed in many cases until the sixteenth or seventeenth year.

Parker states that when this nitrogen is reduced to from 70 to 100 grains daily, the body gradually lessens in activity, and passes into a more or less adynamic condition, which predisposes to the attacks of all the specific diseases, especially malarious affections, typhus, and pneumonia, etc.

It must be assumed from what is known that if the minimum quantity of nitrogen—which, for the sake of argument, we may put as low as 250 grains in the case of a young woman—be not given, a condition of weakness will soon be induced, and with greater or less rapidity, according as the quantity of nitrogen falls much or little below this 250 grains *per diem*. Thus it is easy to understand why, in a year or two, with an average daily consumption of only 100 grains of nitrogen, for instance, important modifications of the nutritive processes are effected, whereby there is produced a direct predisposition to disease.

It is now some sixteen years ago, since I publicly discoursed on the importance of nutrition in the treatment of disease. I have made it the basis of my practice for some years past, and four years ago I described the condition to which I have now again referred as "chronic starvation." In the United States, Dr. Weir Mitchell has employed a system of rapid feeding, assisted by massage and electricity, for the cure of weakly, nervous sufferers, a system which has been found most successful, and Dr. Playfair has done good service in introducing Dr. Weir Mitchell's method into this country. The method in question is essentially a rapidly acting means of introducing nutritive material into the system, and it is dependent for its success on the fact that the principle of the curative influence and action of food is adequately recognized.

It is probable that it will be found, on further investigation, that particular deficiencies in the dietary result in deterioration of particular tissues of the body. The field for inquiry in this direction appears to be a large one. Deficiency in the quantity of meat taken, certainly, according to my experience, appears to have an enormous influence in predisposing to uterine ailments; but, no doubt, other organs of the body also suffer from deficiency in this article of diet. And I have abundant evidence that it plays a very prominent part in predisposing to the serious wasting diseases so often fatal in this country. I refrain from dilating further on this particular point, because such discussion would in this place be inappropriate.

The conclusion which is obviously suggested by the foregoing considerations, is the necessity for a greater attention to the question of diet, in the bringing up of families, than appears at present to be given to it. We all know that health and a good appetite usually go together. But it seems to be too frequently the case that, when the appetite is absent, such absence is taken as a matter of course, and receives no notice. It results from what has been stated, that absence of appetite may lead to most serious results. It is not immediately dangerous, but it is the first step, possibly, in the downward course. A continuously bad appetite constitutes a grave condition, and should be seriously regarded.

SIXTH ANNUAL SESSION OF THE AMERICAN SOCIETY OF MICROSCOPISTS.

Held at Chicago, August 7, 8, 9, and 10, 1883.

(Specially reported for THE MEDICAL NEWS.)

TUESDAY, AUGUST 7TH, FIRST DAY.

THE meeting was called to order by DR. L. CURTIS, President of the Illinois State Microscopical Society, who welcomed the guests.

The President of the American Society, PROF. A. MCCALLA, in his reply, commented upon the growth of and increased interest taken in the Society. He suggested that a good part of the time be devoted to practical demonstrations, and mentioned that the Royal Microscopical Society of London had honored this Society by making its President a Fellow ex-officio; in response to which courtesy the Society should take action.

A recommendation by the Executive Committee, that the by-laws be so amended that any part of the proceedings might be published in any reputable journal, provided that due credit be given to the Society, was adopted; and numerous new members were elected.

In the afternoon, DR. F. M. HAMLIN, of Auburn, N. Y., read the first paper upon the

MICROSCOPICAL EXAMINATION OF SEMINAL STAINS ON CLOTH.

He found by observation that the method of Koblank, viz., to soak out the stains with water was unreliable, since the water disintegrates many, if not most, of the dried spermatozoa. Finding that most fabrics upon which spermatozoa are apt to be dried are more transparent than is usually supposed, he recommends the following procedure:

1. If the stain to be examined is upon any thin cotton, linen, silk, or woollen fabric, cut out a piece about one-eighth inch square, lay it upon a slide previously moistened with a drop of water, and let it soak for half an hour or so, renewing the water from time to time as it evaporates. Then with a pair of needles unravel or fray out the threads at the corners, put on the glass cover, press it down firmly, and submit to the microscope.

2. If the fabric is of such a thickness or nature that it cannot be examined as above, fold it through the centre of the stain, and with a sharp knife shave off the projecting edge thus made, catching upon a slide moistened with water the particles removed. After soaking a few minutes—say five to ten—the powdery mass will sink down through the water and rest upon the slide. The cover-glass may now be put on, and the preparation examined.

The latter plan serves as well for hairs, but great caution must be observed in cutting them, lest the portions bearing the suspected deposit fly away and are lost.

The stained cloth can be twisted and rolled between the fingers to a considerable extent, without destroying the dried spermatozoa.

In the discussion, various members stated their experience in the examination of seminal stains.

DR. GRADLE mentioned that spermatozoa can be stained like micro-organisms, which fact does not seem to be commonly known. Drops of the fluid containing them are dried into a film upon the cover-glass, drawn through a flame, and then stained with a solution of magenta, or some other aniline color, and washed. The spermatozoa attract the eye by reason of their intense staining.

DR. STILLSON asked at what age the secretion of seminal fluid began, which question could not be answered with precision.

A paper by MRS. SARAH WHITING, of Wellesley College, on

COLLEGE MICROSCOPICAL SOCIETIES,

was read by President McCalla, who stated that it was the first contribution to the Society by a lady. It dwelt upon the utility and practical arrangement of microscopical societies amongst college students, based upon six years' experience at Wellesley College.

A paper prepared by Prof. Simon H. Gage, of Cornell College, on *Cataloguing, Labelling, and Storing Microscopical Preparations*, was read in his absence.

In the evening THE PRESIDENT delivered the *Annual Address*, choosing as his theme the

VERIFICATION OF MICROSCOPIC OBSERVATION.

He dwelt upon the extensive application of the microscope for research in almost all sciences and its universal practical employment in numerous applied sciences. He insisted with great earnestness upon the necessity of increased accuracy in microscopic work, illustrating such model work by reference to Tyndall's researches upon spontaneous generation, which comprised over eleven thousand single experiments. The means he suggested for the verification of work were: the repetition of observations, including demonstrations at societies; the use of the camera lucida, and especially of micro-photography; a judicious application of the most varied media and reagents based on all recent researches in chemistry and physics; and the employment of improved lenses and accessory apparatus. All these suggestions were happily illustrated by well-chosen references to appropriate instances.

WEDNESDAY, AUGUST 9TH, SECOND DAY.

PROF. BURRILL, of Champaign, Illinois, spoke on *Preparing and Mounting Bacteria*, giving principally his own experience in staining dried films with aniline colors and the various details to keep the permanent specimens in good order.

Dr. Detmers, of Champaign, made some extemporary remarks on *Pathogenic Bacteria*. The points of special interest were that he had traced Texas fever in cattle to the existence of bacteria in the blood, and that he considered micrococci not a complete form, but merely one of the stages in the cycle of development of certain micro-organisms.

Dr. George E. Fell, of Buffalo, spoke of the

CLINICAL ADVANTAGES OF OZONE AND ITS EFFECTS ON MICRO-ORGANISMS.

He referred at length to the observations of Dr. F. W. Bartlett, of Buffalo, who had used ozone clinically for many years by placing ozone generators in sick rooms in zymotic diseases. He claims to have observed in many cases a mitigation in the course of the diseases, as well as a checking of the spread of the contagious affection to other members of the families. At Dr. Bartlett's request, Dr. Fell had made some incomplete observations on the effect of ozone upon the growth of bacteria. For this purpose, he placed nourishing infusions partly into the ordinary air, partly into chambers in which the presence of phosphorus generated ozone, with the result that, in some instances, ozone hindered bacterial development, but not in all.

In the following discussion, various members gave their experience in attempting to limit the spread of contagious diseases by the use of volatile antiseptics other than ozone. No precise statements, however, were brought forth.

Prof. Burrill pointed out the difficulties met with in the destruction of bacteria by antiseptics in solution, and suggested how unsatisfactory any attempt must be to annihilate bacteria or disease germs in the air; for all disinfectants proved harmful to animals in much less concentration than is requisite to affect the bacteria in the air.

Dr. Gradle endorsed these remarks and illustrated the difficulties of disinfection by referring to the care necessary to render a Lister dressing successful, stating that notwithstanding the abundant presence of carbolic acid, any slight negligence in the application of the dressing may open the way for infection of or through the wound. He suggested that the want of uniformity in the results of Dr. Fell might be due to the presence of different species of bacteria in different instances; for other observers had found difference in the resisting power of different species of micro-organisms to ozone.

Dr. Blackham presented the report of the committe on *Eye-pieces*.

In the afternoon, Dr. Blackham moved to reciprocate the courtesy of the Royal Microscopical Society, by electing its President an *ex-officio* member of this Society, which was adopted.

Prof. Rogers, of Harvard University, read an elaborate paper upon *A Critical Study of the Action of a Diamond in Ruling Lines upon Glass*, which was followed by **Prof. Chester's** (Hamilton College) paper on *Dry Mounting*.

In the evening, **Prof. Walmsley**, of Philadelphia, described and illustrated the details of *Photo-micrography*, and **Prof. Kellicott**, of Buffalo, described *Some Infusoria found on Cray Fish*.

Thursday, August 9th, Third Day.

Dr. A. M. Bleile, of Columbus, read a paper on

THE EFFECTS OF THE DIVISION OF THE VAGI ON THE MUSCLES OF THE HEART,

of which the following are the conclusions:

1. The fibres of the pigeon are more delicate and more friable than in the rabbit.
2. In young pigeons the cross-striation of the muscular fibres of the heart is indicated by the fine granules which might be mistaken for beginning degeneration.
3. Even in the adult pigeon granular fibres are occasionally found by the side of well-marked striated ones, the former being perceptibly narrower. Possibly the granular fibres are still embryonic and destined to replace the older ones as needed.
4. Recently Prof. Rincus has pointed out that the frog's heart has two sets of muscles—the outer one termed the mouth, and the other forming, by its arrangement into trabeculæ, a system of lacunæ in which the blood circulates. In our pigeon-heart preparations, blood-corpuscles seem to lie in interstices, possibly corresponding to the lucunæ of the frog's heart, and these corpuscles when altered by reagents might be mistaken for larger fat-granules.
5. After division of one vagus only, there follows in the heart muscle of the pigeon a fatty degeneration, about equally marked on both sides of the heart, and more plain the longer the animal has been kept alive after vagotomy.
6. After double vagotomy, the degeneration is better marked—*i. e.*, the fat-granules are large, and appear sooner than after one-sided vagotomy. Hence, we conclude that the vagus in the pigeon, as in the rabbit, carries trophic cardiac fibres—no other explanation accounting for the changes found—and that the influences descending by one nerve are sufficient to somewhat retard the degeneration on both sides, which would follow a double vision.

Prof. Updegraff, of Elmira, presented a paper defining *Some Hitherto Undescribed Animalculæ—Perekella-Annelida-Brachionus*, which was dissented from by Prof. Kellicott, who considered these forms but larval stages of other animals.

Dr. Christopher Johnston, of Baltimore, made some remarks upon *A New Method of Polarizing Chemical Crystals*.

The sympathy of the Society was extended to Dr. R. H. Ward, of Troy, the first President of the Society, who has for a long time been hopelessly confined to his home with sickness.

Prof. Rogers then presented an elaborate report of his measurements of the corrections of *A Standard Centimetre*, for which faithful work the thanks of the Society were extended to him. The standard of Prof. Rogers was accepted by the Society.

Prof. Blackhorn, of Dunkirk, presented a paper on *The Relation of Aperture to Amplification in the Selection of a Series of Microscopic Objectives*.

In the evening the Calumet Club held a brilliant and well-attended microscopic *conversazione* and reception in honor of the Society.

Friday, August 10th, Fourth Day.

After the transaction of private business, the following were elected

OFFICERS FOR THE ENSUING YEAR:

President.—Hon. J. D. Cox, of Cincinnati.

Vice-Presidents.—Prof. T. J. Burrill, of Champaign, Ill., and Prof. W. E. Rogers, of Harvard University.

Executive Committee.—Prof. A. H. Chester, of Clinton, N. Y.; Dr. H. A. Johnson, of Chicago; and Gen. Wm. Humphrey, of Jackson, Mich.

Dr. Belfield, of Chicago, showed some *Microphotographs of Lard*, pure and adulterated, to prove that the adulteration with tallow can be detected by the form of the crystals.

Dr. V. S. Clevenzger, of Chicago, read a paper on the *Structure of the Brain in Health and Disease*.

Dr. Thomas Taylor, of Washington, forwarded a paper on *Parasites in Fowls*, describing several varieties of mites found in the tissues of diseased animals.

Dr. M. L. Holbrook, of New York, presented a paper on the

TERMINATION OF THE NERVES IN THE KIDNEYS.

By staining sections of kidney with chloride of gold he traced an abundant network of non-medullated nerve-fibres around the vessels, and could in some instances follow the ultimate fibrillæ into the cement-substance between the endothelial cells.

After the presentation of some additional papers and short addresses by the retiring and incoming Presidents the Association adjourned.

NEWS ITEMS.

The Cholera in Egypt. — The mortality from cholera during the past week is undiminished. The disease has spread in Alexandria, and the mortality has decreased at Cairo.

The cholera mortality returns are as follows:

	Cairo.	Alexandria.	Total for Egypt.
August 7,	70	13	682
" 8,	78	12	627
" 9,	39	22	795
" 10,	37	22	926
" 11,	30	33	789
" 12,	11	21	407
" 13,	6	44	675

The Sanitary Commission has decided to remove the cordon around Alexandria.

Is it Cholera?—English doctors now at Alexandria, who have had experience in India in cholera, as well as the Indian doctors, are reported as saying, that the disease now prevailing in Egypt is of a distinctly different character from the Asiatic cholera. Dr. Abatti, the personal physician of the Khedive, who accompanied His Highness to Cairo, is also reported to have said that his observations there, coupled with his experience in 1865, lead him to the conclusion that the cholera is not of the Asiatic type.

Medical Notes of the Cholera Epidemic.—Dr. J. Mackie, Surgeon to the British Consulate at Alexandria, in his report of July 15th, to the British Foreign Office says: Since my report of the 9th instant [see The Medical News, August 4th, p. 137] there has been a notable decrease in the mortality from cholera in the two villages which have suffered most severely—Damietta and Mansurah. The virulence of the disease, however, seems to continue unmitigated, if I can rely on reports which reach me from intelligent correspondents. The Board of Health at Cairo can give no information, and I am obliged to glean my information from other sources. Reports have been sent to me from Damietta and Mansurah of cases of death in from two to three hours, in which there had been neither vomiting nor diarrhœa. This seems to have occurred so often, that many inhabitants of those villages do not believe it is cholera, but some new disease. I remember, in my own experience and practice here in the cholera of 1865, many such cases. Though the number of victims in the villages first attacked has diminished, and no very severe outbreak has shown itself in any of the other villages, yet, from slight outbreaks occurring here and there, the disease shows a great tendency to spread.

Up to the present, the route it has taken is along the Damietta branch of the Nile southward, in the direction of traffic and prevailing wind, the only deviation from this line of progress as yet being Port Said, Menzaleh, Chibin-el-Koum, and Alexandria, and at none of these places, except, perhaps, Menzaleh, have there been more than a few cases. If this steady, though slow, progress continues, it is likely to find its way along the Nile to Cairo. The cases which have occurred at such places as Chibin-el-Koum and Port Said, may be accounted for by persons escaping from the infected villages, but I have no authentic information.

A great many of the soldiers forming the *cordons sanitaires* have taken the disease, notwithstanding the care taken, and stringent orders issued by the English officers. A letter from Colonel Sartorius of the 12th instant states: "One man Damietta *cordon* taken ill to-day. One officer, eleven non-commissioned officers Mansurah *cordon*, taken ill to-day. Talka *cordon*, one soldier, one officer, and nine men Samanoud *cordon* taken ill to-day, and two men dead. Chibin-el-Koum *cordon*, four taken ill and two dead three days ago." A paragraph, presumably authentic, in the *Egyptian Gazette* of the 14th instant, states "that it was found necessary to change the position of the *cordon* at Samanoud. In doing so, it was necessary to cross a native graveyard, where victims to the prevailing disease had only recently been interred. During the one night that the sentinels remained in the cemetery, they caught the malady."

The disease has now been raging in Egypt for twenty-four days in as fatal a form as the cholera of 1865, judging from the published bulletins; and, with the exception of the few cases at Port Said, most, if not all, of which the sanitary physician declares occurred in refugees from Damietta. The route across Egypt, from Asia to Europe, has been free. The origin of the outbreak at Damietta remains as obscure as ever. The Sanitary Board of Cairo has now announced, almost officially, its belief that the disease has been imported from Bombay. Others also express the same belief, holding the opinion that cholera invariably spreads from India, while those who are not bound by opinion, and ask investigation and proof, are inclined to find in the unsanitary state of the country where the disease first broke out, sufficient to account for an outbreak without importation. If the substance or germ necessary for the production of cholera can be produced or evolved from decaying animal matter, a local origin can easily be found at Damietta. What constitutes cholera, even in India, the means by which it is propagated, are now generally understood; but there must be a first beginning. What is it? If it has had its first beginning in unsanitary India, why not in unsanitary Damietta, with a river flowing through it supplying it with water filled with rotting carcasses of animals which have died of cattle-plague, four hundred of which, according to authentic information, have been fished out and buried since the disease appeared. The soil around is also the best that could be for the propagation of cholera, being loosely alluvial and fecal, and the water often nearly stagnant from the tidelessness of the sea. Under such circumstances, cholera could dwell and thrive. The question still is, how could it originate? The study of this epidemic will be epidemiologically, commercially, and politically of most intense interest, and the investigators will have to be independent men, free from all political influence, if truth is to be arrived at.

The Egyptian medical and sanitary administration has been showing great activity lately, and sent doctors, medicines and disinfectants to the infected villages; but sending one or two young medical men with disinfectants to disinfect an Egyptian village and stop cholera is like pouring a bucketful of water in the sea to flood a stranded ship. However well the work may look when published in the *Moniteur*

Egyptian, it is nearly practically useless. To disinfect an Egyptian town means destroying and reconstructing it—it is impossible to cleanse and disinfect it. And, moreover, I will undertake to say that nine-tenths of the men sent to do the work do not themselves appreciate the meaning and use, and method of disinfection. Sanitary habits and practice which will stop the progress of a zymotic disease are yet foreign to the country and to the nature of the people. Dr. Chaffey Bey reports from Damietta that the measures ordered are not carried out. Benevolent societies have been formed, chiefly by Europeans, to send aid to stricken villages, and have sent at their expense several European doctors who expressed their readiness to go. Many European doctors, experienced in cholera and epidemics, would gladly go to help authorities by their advice, but the difficulty of returning to their work here in case of need, without undergoing a lengthened quarantine, prevents them.

It would seem as if the *cordons sanitaires* have retarded the progress of the disease, and they may retard it till the country is supplied with good water by the rising of the Nile; but there are many reasons why the *cordons sanitaires* cannot stop its progress; where a case, for instance, happens in a village at some distance from an infected place, the people, or some of them, immediately take flight for fear of being shut in, and have escaped long before a *cordon* can be formed. Several cases have come before me, where people have arrived ill of fright, from villages where, perhaps, during the night, some one had died suddenly, and they had fled in terror from supposed cholera and to escape the *cordon sanitaire*. To make it more effective, it would be necessary to surround not only the villages infected, but the whole district.

Under date of July 17th, Dr. Mackie writes that the tendency of the disease to spread, notwithstanding *cordons sanitaires*, is very marked, and I am afraid there is now little hope of saving the country. It has now left the banks of the river and spread more in the direction of the chief line of railway. The *cordons sanitaires* are on a severe trial, and the result will prove whether they have been of any real use. If they prove to be a failure, it is to be hoped that they have had their last trial, here or elsewhere, as they are the cause of great panic and much hardship, which one would not desire to see inflicted if no good result is to be obtained.

Judging the rate of progress of this outbreak by that of 1865, when nothing was done, and the development and spread were so rapid that nothing could be done, it would seem as if the *cordons* have retarded the progress; but that they will stem the tide completely, I have no hope. The fatal nature of the malady is still its marked feature; in that it resembles real Asiatic cholera.—*British Med. Journal*, July 28, 1883.

French Comments on the Cholera in Egypt.—M. Fauvel, at the meeting of the Academie de Médicine of July 24th, fully discussed the present danger of an invasion of cholera. This danger, he said, is in inverse ratio to the distance from the infected point. At present Syria is in most danger on account of its proximity to Egypt, though the invasion of that country does not necessarily compromise Europe. But if Constantinople is attacked, the outlook for Europe is serious; for it will be in vain for Russia, Bulgaria, and Roumania to quarantine. Greece will, in all probability, be able to protect itself, isolated as it is in a great measure. Trieste is a dangerous point for Europe. The Italian Government has made every effort to prevent the importation of the disease, but these efforts are rendered partially futile by insufficient means of action, and the want of energy in the government agents. As to the maritime coast of France, the strict precautionary measures taken since the first outbreak of the disease rather preclude the idea of an attack from that quarter. But there are no measures for preventing an invasion from other European countries should they be attacked. The great question of the moment is, therefore, to prevent the invasion of any part of Europe.

The fact that England is in constant relation with the infected countries should not be lost sight of. The length of the voyage from Port Said to England is not less than fourteen days by steamer: but after fourteen days, if no cholera breaks out on board the vessel, there is no chance that it will be communicated by the passengers, and the English Government will cause all suspected cargoes to be disinfected. The history of cholera in England shows, that whenever that country has suffered from an epidemic, the disease was scourging the northern ports of Europe, and that England's invasion was from that source. Taking these things into consideration, we may affirm that Europe has a good chance of escaping an epidemic. One of the rules of cholera is that the more violent the epidemic, and the more rapid its extension, the shorter is its course and the sooner its extinction; and it is highly probable that the present epidemic will have died out in Egypt in five weeks more. The cholera in Egypt was an importation from India, and is the consequence of the suppression of proper measures for protecting the country, and at England's door lies the responsibility of its importation.

Sanitary Precautions in Turkey.—The Sanitary Council has ordered that vessels arriving from Smyrna be subjected to observation for twenty-four hours in the Dardanelles. This order is due to the fact that a French man-of-war from Port Said disregarded the quarantine regulations at Smyrna and communicated with the town.

British Precautions against Cholera.—The precautionary measures taken by England to prevent the introduction of cholera into her home ports are herewith presented as being of general interest to sanitarians in this country.

The Local Government Board has issued the following rules and regulations, to be enforced and executed by the Port Sanitary Authority for the Port of London:

For the purposes of this Order every ship shall be deemed infected with cholera in which there is or has been during the voyage, or during the stay of such ship in a port in the course of such voyage, any case of cholera.

I.—Regulations as to Detention by Officers of Customs.

Art. 2. If any Officer of Customs, on the arrival of any ship in the Port of London, ascertain from the master of such ship or otherwise, or have reason to suspect that the ship is infected with cholera, he shall detain such ship, and order the Master forthwith to moor or anchor the same in such position as such Officer of Customs shall direct; and thereupon the Master shall forthwith moor or anchor the ship accordingly.

Art. 3. While such ship shall be so detained no person shall leave the same.

Art. 4. The Officer of Customs detaining any ship as aforesaid shall forthwith give notice thereof, and of the cause of such detention, to the Sanitary Authority.

Art. 5. Such detention by the Officer of Customs shall cease as soon as the ship shall have been duly visited and examined by the Medical Officer of Health, or, if the ship shall, upon such examination, be found to be infected with cholera, as soon as the same shall be moored or anchored in pursuance of Art. 10 of this Order. *Provided*, That if the examination be not commenced within twelve hours after notice given as aforesaid, the ship shall, on the expiration of the said twelve hours, be released from detention.

II.—Regulations as to Sanitary Authorities.

Art. 6. The Sanitary Authority shall, as speedily as practicable, with the approval of the Chief Officer of Customs of the port, fix some place within the jurisdiction of the Sanitary Authority where any ship may be moored or anchored for the purpose of Art. 10; and shall make provision for the reception of cholera patients and persons suffering from illness removed under Articles 13 and 14.

Art. 7. The Sanitary Authority, upon notice being given to them by an Officer of Customs under this Order, shall forthwith cause the ship, in regard to which such notice shall have been given, to be visited and examined by the Medical Officer of Health, for the purpose of ascertaining whether she is infected with cholera.

Art. 8. The Medical Officer of Health, if he have reason to believe that any ship within the jurisdiction of the Sanitary Authority, whether examined by the Officer of Customs or not, is infected with cholera, shall, or if she have come from a place infected with cholera, may visit and examine such ship for the purpose of ascertaining whether she is so infected; and the master of such ship shall permit the same to be so visited and examined.

Art. 9. If the Medical Officer of Health on making such examination as aforesaid (whether under Art. 7 or 8) shall be of opinion that the ship is infected, he shall give a certificate in duplicate, and shall deliver one copy to the Master and retain the other, or transmit it to the Sanitary Authority:

Art. 10. The Master of every ship so certified to be infected with cholera shall thereupon moor or anchor her at the place fixed for that purpose under Art. 6, and she shall remain there until the requirements of this order have been duly fulfilled.

Art. 11. No person shall leave such ship until the examination hereinafter mentioned shall have been made.

Art. 12. The Medical Officer of Health shall, as soon as possible after any such ship has been certified to be infected with cholera, examine all persons on board of the same, and all persons who shall not be certified by him, as hereafter mentioned, shall be permitted to land immediately on their giving their names and the places of their destinations.

Art. 13. Every person certified by the Medical Officer of Health to be suffering from cholera shall be dealt with under any regulations that may have been made by the Sanitary Authority under Sec. 29 of the Sanitary Act, 1866; or, where no such regulations shall have been made, shall be removed, if the condition of the patient admit of it, to some hospital or place previously appointed for that purpose by the said Sanitary Authority; and no person so removed shall leave such hospital or place until the Medical Officer of Health shall have certified that such person is free from the said disease. If any person suffering from cholera cannot be removed from the ship, she shall remain subject, for the purpose of this Order, to the control of the Medical Officer of Health; and the infected person shall not be removed from or leave the ship, except with the consent, in writing, of the Medical Officer of Health.

Art. 14. Any person certified by the Medical Officer of Health to be suffering from any illness which such officer suspects may prove to be cholera, may either be detained on board the ship for any period not exceeding two days, or taken to some hospital or other place previously appointed by the Sanitary Authority, and detained there for a like period, in order that it may be ascertained whether the illness is or is not cholera. Any such person who, while so detained shall be certified by the Medical Officer of Health to be suffering from cholera, shall be dealt with as provided by Art. 13 of this Order.

Art. 15. The Medical Officer of Health shall in the case of every ship certified to be infected, give directions, and take such steps as may appear to him to be necessary for preventing the spread of infection, and the master of said ship shall forthwith carry into execution such directions as shall be so given to him.

Art. 16. In the event of any death from cholera taking place on board of such ship while so detained, the Master shall, as directed by the Sanitary Authority or the Medical Officer of Health, either cause the dead body to be taken out to sea and committed to the deep, properly loaded to prevent its rising, or shall deliver it into the charge of said authority for interment; and the Authority shall thereupon have the same interred.

Art. 17. The Master shall cause any articles that may have been soiled with cholera discharges to be destroyed, and the clothing and bedding and other articles of personal use likely to retain infection which have been used by any person who may have suffered from cholera on board such ship, or who, having left such ship, shall have suffered from cholera during the stay of such ship in any port, to be disinfected, or (if necessary) destroyed; and if the Master shall have neglected to do so before the ship arrives in port, he shall forthwith, or upon the direction of the Sanitary Authority or the Medical Officer of Health, cause the same to be disinfected or destroyed, as the case may require; and if the said Master neglects to comply with such direction within a reasonable time, the Authority shall cause the same to be carried into execution.

Art. 18. The Master shall cause the ship to be disinfected, and every article therein, other than those last described, which may probably be infected with cholera, to be disinfected or destroyed, according to the direction of the Medical Officer of Health.

DISINFECTION OF THE MAILS AT MARSEILLES.—A laboratory has been fitted up at Marseilles for the purpose of disinfecting the mails. It consists of a closet in which is a large table for receiving the contents of the mail sacks. The postal agents of the ship under observation carry the mail matter and sacks, previously unfastened, to the closet; they then retire to the ship or lazaretto. After having hermetically closed all the openings in the chamber, carbolized or chlorinated vapor is thrown in. After this the postal clerks of the city bring their mail, put it into the disinfected sacks, which are left for the postal clerks of the ship, and they carry away with them the disinfected mail. There is no communication between the two sets of clerks. Before being fumigated, the wrappers and envelopes of all the mail matter are cut through.

THE MEDICAL NEWS' Indian mail, just received, bears emphatic evidence of this antiseptic treatment, having been punctured through and through, in several places, by a broad, flat, and sharp instrument, and upon opening, it smelled strongly of chlorine.

CHOLERA HOSPITAL FOR PARIS.—The Director of Public Charities in Paris has asked the Municipal Council to grant a credit of 1,500,000 francs to be used in building a provisional hospital of 600 beds, in view of an attack of cholera. The Commission proposes—1. To give a sum of 400,000 francs. 2. To devote this sum to the construction of barracks, to contain 200 beds, with the necessary attendants and facilities for treatment.

CHOLERA PRECAUTIONS IN SPAIN AND PORTUGAL.—The Department of State has been informed by the United States Consul General at Lisbon, that sanitary measures have been taken by the Portuguese Government against the introduction of cholera. By a ministerial decree the Egyptian ports of the Mediterranean were declared infected by cholera, and all the Red Sea ports were declared suspected. The Spanish Government has imposed like vigorous measures upon vessels arriving from the English ports, and a portion of the Madrid press has advised that until like restrictions are imposed in Portuguese ports upon such vessels, an embargo be laid upon all persons entering Spain by land from Portugal. It is said that concert of action is contemplated by certain of the European powers as regards the continental ports of Central Europe, and that stringent measures are under consideration to restrict intercourse with infected ports.

CHOLERA PRECAUTIONS IN BERLIN.—The health officer of Berlin has issued the following instructions regarding the precautions to be taken to prevent the introduction of cholera into Germany:

The disinfectants used in ships must be; (1) a solution of pure carbolic acid in water (1–18). 2. Corrosive sublimate solution must be used for disinfecting the holds of ships and their contents. 3. Where these disinfectants cannot be conveniently used, steam, at a temperature of 280° Fah., must be employed for one or two hours. The different apartments of the ships, especially the cabins, berths, and the spaces between decks must be disinfected with carbolic acid solution. The decks, walls, and floors must be washed with rags previously soaked in the carbolic acid solution. The sick-rooms, and all vessels and utensils must be frequently washed and disinfected with this solution. Clothing must be washed in a disinfecting solution and then subjected to steam disinfection. 4. Where it is necessary to disinfect a person, he must be thoroughly washed with green soap, and must afterward be bathed. 3. Bodies of persons supposed to have died of cholera on board ship must be wrapped in cloths as soon as possible, and soaked in carbolic acid solution.

The disinfection of the holds of ships and their contents is to be carried out, with solution of corrosive sublimate, in the following manner: According to the quantity of bilgewater, one and a half to two and a half pounds of corrosive sublimate must be completely dissolved in from ten to twenty quarts of water. (For every thousand quarts of bilgewater two and one-half pounds of sublimate must be used.) Then, by means of a pump and a pipe running above deck the water must be pumped from the after part through the pipe to the forward part of the hold. It is of course understood that care must be taken, in case the hold is not connected throughout, that this washing must extend to the separate partitions of the bulk-heads, and a complete circulation of the bilgewater carried on. The sublimate solution must then be poured into the forward part of the hold and the pumping again carried out. On account of the poisonous nature of corrosive sublimate, all vessels containing it or its solution must be properly labelled, and after being used must be locked up. To know whether the disinfection has been properly carried out, and the water thoroughly impregnated with the solution, a strip of copper sheathing cleaned with emory-paper must be let down half-way into the water. If the disinfection is sufficient, there will form, at the expiration of about two minutes, a distinct gray coating upon the part of the copper strip which was immersed. If this coating does not form at the end of two minutes, the disinfecting solution is not sufficiently strong and must be strengthened and the pump-work gone over again.

After the bilgewater has been treated in the above manner with the sublimate solution, it must be left in the hold for twenty-four hours; at the expiration of this time the contents of the hold must be pumped out and an equal quantity of sea-water pumped in. In cases in which it is suspected that some of the old water still remains, this must be repeated at least three times.—*Berliner klin. Wochensch.*, No. 31, 1883.

GERMAN INVESTIGATION INTO CHOLERA.—The German government will send a scientific expedition to Egypt this week to examine into the origin, nature, and cause of the cholera now prevailing there, and to ascertain the best measures to prevent the spread of the disease.

QUARANTINE AT SAN FRANCISCO.—Fearing the introduction of cholera from China and Japan, the Board of Health has adopted a resolution that all Asiatic ports be declared infected, and that all vessels arriving be quarantined until the fullest examination be made.

YELLOW FEVER IN HAVANA.—There were twenty-nine deaths from yellow fever in Havana, for the week ending August 11th.

SMALLPOX IN NEW ORLEANS.—The mortality from smallpox for the week ending August 4th was thirteen, against twenty-one for the preceding week.

SMALLPOX IN MINNESOTA.—The smallpox is reported to be making terrible ravages among the Indians of Itaska county, Minnesota. In two small towns eighty-five deaths have been reported.

AMERICAN DERMATOLOGICAL ASSOCIATION.—The seventh annual meeting will be held at the Sagamore House, Green Island, Lake George, on Wednesday, Thursday, and Friday, August 29th, 30th, and 31st. Papers will be read by the following gentlemen: Dr. Piffard, Treatment of Acne; Dr. Hyde, A Study of the Coincidence of Syphilitic and Non-Syphilitic Affections of the Skin; Dr. Graham, General Exfoliative Dermatitis; Dr. Stelwagon, Impetigo Contagiosa; Dr. Robinson, Alopecia Areata; Dr. Duhring, 1. On the Value of a Lotion of Sulphide of Zinc in the Treatment of Lupus Erythematosus, 2. Report of a Case of Ainhum with Microscopic Examination; Dr. Atkinson A Case of Multiple Cachectic Ulceration; Dr. Sherwell, 1. Pseudo-Psoriasis of the Palm, 2. Malignant Papillary Dermatitis; Dr. Bulkley, 1. A Hitherto Undescribed Vegetable Parasite Found on the Human Skin; 2. A Clinical and Experimental Study on Pruritis; Dr. Van Harlingen, Experiments in the Use of Naphthol; Dr. Fox, A Trip to Tracadie.

THIRD INTERNATIONAL OTOLOGICAL CONGRESS.—The Committee of Organization for the Third International Otological Congress—Dr. Burchhardt-Merian (Bâsle), president, A. Hartmann (Berlin), L. Löwenberg and Ménière (Paris)—at a meeting on March 18th, decided to abide by the decision of the Second Congress to hold the session of the Third in Bâsle, Switzerland, the first week in September, 1883. The committee enlarged their number by the addition, among others, of Drs. St. John Roosa of New York, and Blake of Boston.

A SANITARY CONVENTION will be held at Muskegon, Michigan, on August 23d and 24th, under the auspices of the State Board of Health.

There will be sessions the first day at 2 P.M. and 8 P.M.; on the second day at 9 A.M., 2 P.M., and 8 P.M. At each session there will be addresses or papers on subjects of general interest pertaining to public health, each paper to be followed by a discussion of the subject treated.

The objects of the Convention are the presentation of facts, the comparison of views, and the discussion of methods relating to the prevention of sickness.

Among the subjects of general interest which it is expected will be presented and discussed are the following:

Communicable diseases—scarlet fever, diphtheria, and smallpox.

Ventilation of residences and public buildings.

Food, and the sanitary regulation of markets.

Instruction in the public schools on the effects of alcohol and narcotics.

Adulterations and nostrums.

The disposal of refuse organic matter.

The International Medical Congress, Copenhagen, 1884.—The eighth International Medical Congress will be held in Copenhagen from August 10 to 16, 1884. The General Organizing Committee, formed for the preparatory work, is composed of the following members, living either in or near Copenhagen: *President:* Prof. Dr. P. L. Panum. *Secretary-General:* Prof. C. Lange. *Secretaries;* Dr. O. Bloch, Dr. C. J. Salomonsen, and Surgeon-General Joh. Möller. *Honorary Treasurer:* Prof. Dr. E. Hansen Grut, besides the Chairmen of the Sections, viz.: *Anatomy:* Prof. Chievitz. *Physiology:* Prof. Dr. P. L. Panum. *General Pathology and Pathological Anatomy:* Prof. Dr. C. Reisz. *Medicine:* Prof. F. Trier. *Surgery:* Prof. Dr. Holmer. *Hygiene and State Medicine:* Dr. E. Hornemann. *Military Surgery and Medicine:* Director-General of the Medical Department of the Army, Salomon. *Mental and Nervous Diseases:* Prof. Dr. Steenberg. *Obstetric Medicine and Surgery, and Gynæcology:* Prof. Dr. Stadfeldt aud Prof. Dr. Howitz. *Diseases of Children:* Prof. Dr. Hirschsprung. *Ophthalmology:* Prof. Dr. E. Hansen Grut. *Diseases of the Skin and Syphilis:* Prof. Dr. Haslund. *Diseases of the Ear and Throat:* Dr. W. Meyer.

In order that the meeting of so many distinguished medical men, who, it is hoped, will attend on this occasion, may be as advantageous as possible, the Organizing Committee, following the example of the later Congresses, will communicate with distinguished men of different branches and of different countries, in order to prepare a programme. "This programme, as well as the rules, will be forwarded to those of our colleagues who we suppose take an interest in the work of the Congress, and who might be inclined to participate in it. In order that the programme may be ready as soon as possible, we shall be pleased if communications, referring to the work of the Congress, are sent to the Secretary-General before October 1 next, so that it may be possible for us to have regard to them in arranging the definite programme. The programme and rules will be forwarded, as soon as possible, to everyone qualified to participate in the Cougress, who within the limited time has announced to the Secretary-General his interest in the Congress, and his intention of participating in it; and, if possible, which section he intends chiefly joining."

Honors to Medical Men.—The Queen has conferred the honor of baronetcies on Mr. Prescott Hewett and Dr. Andrew Clark, and a knighthood on Mr. George Porter, of Dublin. The profession in Ireland remonstrated that a Surgeon of the Queen, in Ireland, should not have been the recipient of an hereditary title. Dr. Banks to whom a knighthood was also offered, in view of this expression of opinion of his colleagues in London, has felt it inconsistent with his professional duty to accept this mark of royal favor.

Health in Michigan.—Reports to the State Board of Health for the week ending August 4, 1883, indicate that inflammation of the bowels, cholera infantum, remittent fever, typho-malarial fever, and whooping-cough have increased, and that diarrhœa has decreased in area of prevalence.

Including reports by regular observers and by others, diphtheria was reported present during the week ending August 4, and since, at sixteen places; scarlet fever at twelve places; and measles at eleven places.

Compared with the average for the month of July in the preceding six years, neuralgia and bronchitis were considerably more prevalent, measles, rheumatism, and tonsillitis were more prevalent, and membranous croup, whooping-cough, and remittent fever were less prevalent during the month of July, 1883.

Obituary Record.—At Albany on August 13th, in the fiftieth year of his age, Jacob S. Mosher, M.D., Professor of Medicine in the Albany Medical College.

Dr. Mosher was born in Albany County on March 19, 1834. He entered Rutgers College in 1853, and in 1863 he received the degree of M.D. from the Albany Medical College. He at once tendered his services to the Government, and until the close of the war he served with the Army of the Potomac, and in the Washington Hospitals. He was Surgeon-General of the State of New York under Governors Hoffman and Dix, and from 1870 to 1876 he was Deputy Health Officer of the port of New York. At the time of his death he was a member of the Albany Board of Health, a Professor in the Albany Medical College, Dean of the Faculty of the College of Pharmacy, President of the Alumni of the Albany Medical College, and Physician to the Albany Hospital.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM AUGUST 6 TO AUGUST 13, 1883.

McParlin, Thomas A., *Lieutenant-Colonel and Assistant Medical Purveyor.*—Relieved from duty in charge of Purveying Depot in San Francisco, California, to take effect September 1, 1883, and will then proceed to New York City, and relieve Assistant Medical Purveyor Ebenzer Swift of the charge of the Purveying Depot in that city. Assistant Medical Purveyor McParlin will transfer all funds and public property in his possession to Medical Storekeeper Henry Johnson, who, until further orders, will perform the duties of Acting Assistant Medical Purveyor at the Purveying Depot in San Francisco.—*Par. 5, S. O. 183, A. G. O., August* 9, 1883.

Woodward, Joseph J., *Major and Surgeon.*—Leave of absence granted, on account of sickness, by S. O. 34, extended six months.—*S. O. 179, A. G. O., August* 4. 1883.

Byrne, Charles B., *Captain and Assistant Surgeon.*—Relieved from duty at Fort Craig, N. M., and assigned to duty at Fort Lewis, Colorado.—*Par. 3, S. O. 161, Department of the Missouri, August* 6, 1883.

Lauderdale, John V., *Captain and Assistant Surgeon.*—Granted leave of absence for two months, to take effect on or about the 15th instant.—*Par. 2, S. O. 90, Department of the Missouri, August* 6, 1883.

Banister, John M., *First Lieutenant and Assistant Surgeon.*—Relieved from duty in the Department of the Missouri, and assigned to duty in the Department of the East.—*Par. 5, S. O. 183, A. G. O., August* 9, 1883.

Carter, William F., *First Lieutenant and Assistant Surgeon.*—Relieved from duty in the Department of Texas, and assigned to duty in the Department of the East.—*Par. 5, S. O. 183, A. G. O., August* 9, 1883.

Kane, John J., *First Lieutenant and Assistant Surgeon.*—Relieved from duty in the Department of the Missouri, and assigned to duty in the Department of the East.—*Par. 5, S, O. 183, A. G. O., August* 9, 1883.

Owen, W. O., Jr., *First Lieutenant and Assistant Surgeon.*—To proceed from Vancouver Barracks to Fort Walla Walla, W. T., and report to the commanding officer of the latter post for temporary duty.—*S. O. 101, Department of the Columbia, July* 27, 1883.

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ORIGINAL LECTURES.

PREATAXIC TABES DORSALIS.

A Clinical Lecture delivered during the summer session of the McGill Medical Faculty.

BY WILLIAM OSLER, M.D., F.R.C.P. LOND.,
PROFESSOR OF THE INSTITUTES OF MEDICINE, MCGILL COLLEGE, MONTREAL.

GENTLEMEN: In locomotor ataxia we may, for clinical convenience, recognize three stages, the *preataxic*, in which, without any incoördination, there are certain other well-defined and characteristic symptoms; *the ataxic*, in which the disordered muscular movements predominate; and a final *pseudo-paralytic* stage, in which the patient is a helpless cripple. The man before you is an interesting illustration of the early, or preataxic stage. You see, as he walks around the arena, that the gait is normal, and you certainly would not suppose from his appearance that he was afflicted with this disease. From the fact that locomotor ataxia may exist for years without *ataxia*, the name tabes dorsalis, given by Romberg, is preferable, or posterior spinal sclerosis, which indicates the location and nature of the lesion. When we consider that about fifty per cent. of tabetic patients are not ataxic[1] the name in common use is misleading, and gives undue prominence to a symptom which is often absent.

The clinical record of this patient is as follows: Samuel S., of Sherbrooke, Que., aged 43, Canadian, a cabinetmaker by trade, but for some years (12) past a millwright, came to the hospital to be treated for failure of eyesight. Nothing special in the family history. Has been married nineteen years; two children living, three dead; one, a year old, had a rash on the body, the other two were still-born. Had gonorrhœa; can get no history of chancre. Formerly took spirits freely, but has been temperate for some years. Has used tobacco to excess, also opium. In his occupation as millwright has been much exposed to wet and cold, particularly when working in the flumes, and on several occasions has been for hours in ice-cold water. For nearly four years he has had what he calls rheumatic pains in the legs, at irregular intervals; sometimes six months would elapse, and at others two or three attacks would occur in a couple of weeks. He describes the pains as intense, coming on with great rapidity, localized often in spots not more than an inch or two in extent, which are acutely sensitive when they are present; duration brief, two or three seconds, and then they pass away as quick as they came, to return again in a few minutes. Sometimes they have been so bad that he has not slept; in his own words, "they would just give me breathing spells, and then I had to clinch my teeth to bear the next pain." No tingling or pins and needles. For about a year has noticed that the eyesight was failing; may have been present for a longer time, but he was not conscious of it.

Examination: Patient is a slight, dark man, fairly nourished. Gait is unaffected. Muscles moderately developed. Sensation in legs good; not retarded. Pupils are contracted, round, measure 3.5 mm. They do not react to light (reflex immobility, reflex iridoplegia). Act during accommodation and in associated movements when eyes move upward and inward. Dr. Buller tested the vision, and reports $\frac{6}{100}$ with right eye and $\frac{22}{100}$ with left eye. Considerable limitation of field of vision in upper and outer parts. Optic nerves bluish-white in color; margins well defined; all the minute vessels of the disk are gone, only the larger trunks remain, and they, too, are diminished in size. Color-perception for red and yellow good; he thought the green was dark-brown, almost black. The patellar tendon-reflex is absent. Plantar, cremasteric, and abdominal reflexes are present.

The eye symptoms, lightning pains, and absence of knee-jerk, are the chief features presented by this case, and together they are amply sufficient to establish the diagnosis of tabes dorsalis. Let us consider these symptoms a little more closely, and, first, the ocular phenomena, which are among the earliest and most remarkable nerve disturbances in the disease, and of great diagnostic importance. When I place the patient before the window, shade his eyes with my hand, and then suddenly expose them to the bright light, no change takes place in the diameter of the pupils. Tested with a stronger light, the same peculiarity is noted; the pupils are immobile and do not react to the stimulus. If now, after looking at my fingers at eighteen inches he then directs his vision into the distance, the pupils dilate with the relaxation of accommodation, and contract again when he looks at a near object. While not responding to the stimulus of light, they are active during accommodation. This reflex immobility of the pupil, first described by Dr. Argyl Robertson, and sometimes called after him, is present in a large proportion of cases of tabes. In 84 cases of Prof. Erb it was noted absolutely in 59, and diminished in 12. Of these 71 cases, 43 were in the preataxic stage of the disease. In Gower's address, just to hand, on eye symptoms in spinal disease, the light reflex is stated to have been lost in 48 out of 72 cases. Usually the reflex immobility is associated with myosis, which exists in this man in a moderate degree. The only other affection in which this sign has been specially noted is progressive paresis of the insane. Not only is the power of reflex contraction of the pupils lost, but reflex dilatation may also be suspended. If you stimulate strongly the skin of a healthy person, a slow reflex dilatation of the pupils takes place, but in the majority of cases of tabes this does not occur. We could not get this reflex on strong galvanic stimulation of the skin of the neck and shoulder of this man. The precise locality of the lesion which causes these early pupil symptoms is unknown, but if you consult the diagram of the pupil centres, which you have in your physiology notes of last winter, you will see that, as Erb says, the local degeneration causing the loss of light reflex must be somewhere in the pathway between the centres of the optic and the third nerves.

The chief complaint of this patient is a steadily advancing loss of sight, which ophthalmoscopic examination shows to be due to atrophy of the optic nerve. Many of you have had an opportunity of examining the disks in the ophthalmoscope room, and studying the characters of the sclerotic atrophy—the blue-gray color, the flatness of the disks, the absence of small vessels, and their sharp distinct outlines. With no other spinal affection is atrophy of the optic nerves so frequently associated. It usually begins early, before the second stage of the disease is reached, and the patient may be quite blind by the time the ataxia develops, or, indeed, before there is a suspicion of tabes. The atrophy is progressive, and ultimately, though it may be after the lapse of months or even years, total blindness results.

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[1] Erb, in eighty-four cases, mentions that forty-three were in the initial stage and presented no ataxia.

Color-perception is often disturbed; most frequently patients lose the power of distinguishing red and green, while that for yellow and blue may be retained. This man says that green appears to him dark-brown or almost black. His perception of red, yellow, or blue is good. There are other eye symptoms, not present in this instance, which may puzzle you not a little, if unaware of their connection with tabes. I refer to the local palsies of the external eye muscles, and the production of squint, double vision, and ptosis. These, too, are often preataxic symptoms and are quite as common as those which we have considered. Double vision, with or without positive squint, is often a most troublesome feature, and the patient may be for months under the care of an oculist, or, indeed, have an operation performed for strabismus. Some years ago, I knew a gentleman who had intractable ptosis and squint without any other special symptoms. He has since become ataxic. I have at present under observation a gentleman who had external strabismus and double vision for six or seven months, and now has severe pains, bladder trouble, and absence of the patellar reflex. In adult men, the occurrence of ptosis, squint, or double vision, should suggest to you the possibility of early tabes and the necessity of examining for other signs.

Besides the failure of vision, the patient has but one complaint—the terrible pains which have attacked him at times during the past four years. The account which I read to you, is a typical description of the so-called lightning or electric pains of tabes. They are usually mistaken for rheumatic pains, and affect chiefly the lower extremities, sometimes the back and sides, rarely the arms. They vary greatly in intensity and in the frequency of their occurrence; weeks or months may elapse between attacks. The suddenness of their onset, the rapid darting or flashing character, is well expressed in the terms electric, fulgurating, or lightning. They fly about from place to place, and when a bad bout comes the patient may cry out with each pain, and they may recur so rapidly that, as our patient says, there are only breathing spells between them and just time to clinch the teeth to bear the next stab. The skin over the site of the pain may be intensely sensitive—hyperæsthetic. Occasionally the pains are dull, heavy, and dragging, not sharp and stabbing; this, however, is quite exceptional. Very few, not five per cent., of ataxic patients escape these torments. One other important symptom is presented by this man; when I strike the patellar tendon of the crossed leg with the rim of the stethoscope, there is no response in muscular contraction of the quadriceps extensor, and the leg is not jerked up as in health. The knee-jerk or patellar tendon-reflex is absent, and since Prof. Westphal called attention to this sign, it has come to be regarded as of great diagnostic value in tabes. Exceptionally, the knee-jerk is absent in persons in whom there can be no suspicion of posterior spinal sclerosis; but absence of it in conjunction with lightning pains or any of the ocular phenomena, may be regarded as proof positive of the existence of the disease. Lest you may think that rather a strong statement, let me read you a paragraph from a lecture by Dr. Buzzard, whose work on *Diseases of the Nervous System* I would specially commend to you as embodying the rich clinical experience of an unusually acute observer. He says, "It is of much importance to remember that the two symptoms—on the subjective side, pains of the character described, and, on the objective side, absence of the patellar tendon-reflex (with a fairly normal condition of the quadriceps extensor muscle)—are the most constant, as they are probably the earliest of all. My belief is that if we meet a patient who exhibits them both, we do not need the presence of any other in order to form a diagnosis of tabes dorsalis." The patellar tendon-reflex is absent in about ninety-six per cent. of all cases.

Among other symptoms which may be present in the first stage are localized regions of anæsthesia, numbness, pins and needles, but more common with pronounced ataxia; attacks of obstinate vomiting occurring without obvious cause, the *crises gastriques* of Charcot, and vesical and rectal troubles. Disturbances in the sexual function are common in tabes; sometimes there is at the onset satyriasis, usually as the disease advances, there is loss of sexual vigor, and finally impotence. In connection with this, I may mention to you an interesting case which I saw today: A gentleman from near Chatham, Ont., has gradually become impotent, and the question has been raised by an eminent American specialist whether the loss of sexual power was not an early tabetic symptom. The man is powerfully built, accustomed to out-door life, had syphilis about fourteen years ago, and has abused his sexual powers to excess. For three months he has been on a strict anti-syphilitic treatment without any benefit, and he is now practically impotent. The testicles are soft and flabby, and there is a large varicocele. There are none of the tabetic symptoms presented by the case we have just considered, though he does complain of dragging pains at times in the legs. In rare instances, impotence is an early, perhaps initial symptom in tabes, but whether it is so or not, in this instance, time alone will tell. Dr. Bray, of Chatham, under whose care he is, will doubtless know in a few years. Possibly the varicocele may have something to do with his trouble.

You doubtless are aware that much discussion has taken place lately regarding the cause of tabes, and many facts have been brought forward by Fournier, Erb, Gowers, and others to show the close connection between it and syphilis. Statistics prove that considerably over fifty per cent. of all tabetics have had syphilis,[1] but whether this is simply a matter of association, or whether a definite causal relationship exists, is not yet clear. You should be especially careful in obtaining the history of a patient to ascertain if he has had syphilis, as the treatment may be thereby considerably influenced. There are some indeed who regard the occurrence of tabes as in itself a proof of the existence of syphilis, but this is an extreme view and not borne out by facts. In the case you have just seen we can obtain no positive evidence of infection; true, he has been *in the way of it*, having had gonorrhœa, and the death of three children, one with a general rash, is a suspicious circumstance, but he is an intelligent man, anxious to give all details and he seems quite certain that he never had a sore on his penis or any secondary manifestations. It is astonishing how reluctant some men are to acknowledge the pox. Even an intelligent physician will conceal the fact from his best friend and deceive him grossly, as in the following instance. A few years ago, after a medical dinner in London, the conversation turned on this very subject, tabes and syphilis, and one gentleman was very positive about the invariable association of the two. Our host stated that he had under observation a medical man, the subject of tabes, who offered a satisfactory refutation of this view as he had never had syphilis. I ascertained the name of the surgeon referred to, and to my surprise found that it was a man with whom I had been acquainted on the continent, and who at the time was under treatment for secondaries.

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[1] In the Vienna Correspondence of *Canada Medical and Surgical Journal*, Dr. James Stewart states that Dr. Weiss found only ten syphilitics in one hundred cases of tabes.

Exposure and cold, especially with muscular fatigue, are believed to be potent influences in the etiology of tabes, and in this connection it is worthy of note that our patient has been much exposed to cold and wet when working at his trade as millwright, often up to his waist in ice-cold water.

From the fact that he has had lightning pains for over four years you may gather that even the initial stage may be very prolonged. Tabes is perhaps the most chronic of all nervous affections, and in individual cases it is impossible to predict what the course will be. This patient may not become *ataxic* for years; unfortunately for him, the optic atrophy will almost certainly be progressive and lead to total blindness. Occasionally the course of the disease is very rapid. I had arranged to show you another case to-day, a pronounced ataxic, with the characteristic gait, etc., but he sent word that he was too unwell to come. This man has had syphilis, has suffered from cerebral manifestations, and now for nearly two years has presented symptoms of tabes, the incoördination being now so great that he moves about with very great difficulty. When once established, the disease is, as a rule, hopelessly incurable; it is impossible to restore sclerotic nerve-tissue to the normal state. The most we can hope to do is to arrest the progress and alleviate some of the more distressing symptoms. Where there is a decidedly syphilitic history, as in the case I just referred to, a thorough course of mercury and iodide of potash should be tried. It has done him no good, but there are instances on record in which such a plan has been of material benefit. Of course, the remedies in vogue in the treatment of the disease are legion. At present great confidence is placed in nitrate of silver, in quarter of a grain doses three times a day, continued for months, intermitting every fifth week to prevent deposition of the salt and staining of the skin. It seems to relieve the pains, and in some cases the incoördination has disappeared during its employment. We shall put this patient on a prolonged course of the silver, and order galvanism to the spine. Rest is an important element in the treatment, but in many instances, as in this one, impossible to procure. When the electric pains are severe, friction (massage) is beneficial and in very bad spells, hypodermic injections of morphia.

I have no belief in the restitution by therapeutic means of a sclerotic tract in the spinal cord; as well might we hope for restitution of a group of sclerotic (cirrhotic) liver lobules. Curiously enough, even when decided amelioration does take place or a cure is apparently effected, the lesion in the posterior columns may remain unchanged. In one of the recent numbers of the *Archiv für Psych.*, Dr. Schultze reports a remarkable case which illustrates this. A patient of Dr. Erbs' was apparently cured, the ataxia and pains disappeared; absence of patellar reflex and slight vesical trouble alone remained. Twelve years after the appearance of the symptoms of ataxia, and eight after their disappearance, he died of poisoning. At the autopsy the posterior sclerosis was well marked in the lumbar section of the cord, and there was degeneration of the posterior root-zones in the dorsal and cervical regions.

The opinion is gaining ground that locomotor ataxia is not simply posterior spinal sclerosis, but a widespread affection of the sensory nerves; and taking this view the various peripheral nerve changes, the optic atrophy, which is so common, the occasional affection of the auditory, and the degeneration of the cutaneous nerves which has been described—all come in as part of the general affection.

ORIGINAL ARTICLES.

DEATH FOLLOWING THE EXTERNAL USE OF POWDERED BORACIC ACID.

Reported by L. D. Brose, M.D., Ph.D.,
PROFESSOR OF ANATOMY IN THE MEDICAL COLLEGE OF EVANSVILLE, IND.

A. B., American, æt. 31 years, admitted to City Hospital May 1st, for a large open sore on the outer surface of the right thigh. He stated that one year and a half ago he entered St. Mary's Hospital with an extensive cellulitis, involving the right leg and thigh, and that Dr. A. M. Owen had made an incision extending from just above the external malleolus to within a short distance of the great trochanter. The wound in the leg healed, but that in the thigh only partially closed, and finally he, of his own accord, left the house. He was next treated at the Poor Asylum, but left that institution before receiving any marked benefit.

After his admission to the City Hospital the hot iron was freely applied to the sore, followed by a poultice, and subsequently, for three days, a lotion of potassio-tartrate of iron. This was then discontinued, and replaced by the powdered boric acid, frequently dusted on, and renewed during the day. The next four days the wound improved rapidly, the granulations becoming healthy and very numerous. May 11th, just five days since the use of the acid, he complained to the resident, Dr. Hilsmeyer, of diarrhœa, when he administered pil. hydrarg., followed by an astringent. This seemed to check his bowels, and the potassio-tartrate of iron, which he had also been taking internally, was discontinued. The following day, the diarrhœa returning, he was given pulv. rhei, followed by tr. krameria. His mind at this time was clear, temperature normal, with slight frequency of pulse. This failed to check his diarrhœa, and the patient began to vomit his food. The granulations also assumed a sluggish appearance, and the boracic acid was discontinued for the iron lotion. The diarrhœa was finally controlled by an enema of tr. opii and argenti nitras, but only at the expense of increasing the vomiting, and large quantities of water and mucus were now ejected from the stomach whenever the patient made the slightest attempt to swallow either a solid or liquid. Carbolic acid, calomel gr. $\frac{1}{6}$, hydrocyanic acid, sodii bicarb., all in turn, failed to influence his stomach. May 15th, the following day after discontinuing the boric acid, the temperature in the mouth was 97.4°, pulse 105, intellect clear, and the patient complained only of great weakness. The eyes had a peculiar staring appearance, while the body was bathed in a cold, clammy perspiration. On being asked, he said that for several days past he had passed his water several times during the night, and this upon examination proved to be intensely acid, high colored, and without a trace of albumen.

Hypodermics of morphia and atropia were resorted to, which controlled an annoying hiccough and partially relieved the vomiting. May 16th, his temperature at 2 P.M. was 96° in the mouth, 98° in the rectum; tongue red, pointed, but moist; pulse 140, and almost suppression of the urine, which was drawn off by the catheter. A stimulating enema of whiskey and digitalis was given, after which the bowels, which had remained confined for several days, moved once. During the night of the 16th he vomited blood repeatedly, the pulse became very rapid and feeble, notwithstanding repeated subcutaneous injections of morphia and atropia, and death occurred on the morning of the 17th, at six o'clock, just three days since the last application of the boracic acid. At the autopsy, which was commenced by myself but completed by Dr. R. M. P. Ames, of the U. S. Marine-Hospital Service, the following notes were made: Lungs normal. Heart normal in appearance. The right ventricle contained a large clot, portions of which were ante-mortem in character. No valvular lesions. Stomach presented evidence of congestion, and the mucous membrane several spots of erosion. Intestines deeply congested and inflamed. Liver enlarged, especially the right lobe, which was much congested and softened. No reaction to tr. iodine. Gall-bladder greatly distended with bile. Spleen enlarged, and the pulp highly inflamed. Kidneys normal in size, and the capsule readily stripped off. Cortex on section of a yellowish hue.

Microscopical examination of liver and kidney: The former presented great swelling of the liver cells, which had lost their polygonal character, become very granular, and contained an increased number of nuclei. The interstitial tissue in the region of the hepatic artery and portal vein had undergone proliferation, and this, along with the wandered-in leucocytes, had in one instance progressed almost to abscess formation. Kidneys: cells highly granular and swollen. In many of the tubules a granular exudation is observed, evidently derived from the cells, and not due to their breaking down, as the cells themselves are seen occupying their normal relation to the basement membrane. Tube-casts are observed in some of the tubes that have been cut transversely. There is no appreciable interstitial involvement. In both the liver and kidney sections much bile pigment is abundantly scattered throughout the tissues.

As a summary, the prominent symptoms may be mentioned: Great gastro-intestinal inflammation, giving rise to obstinate vomiting and purging; a clear intellect up to the last, along with staring eyes, a very rapid and feeble pulse, low temperature, and intense acidity of the urine. Unfortunately the reaction of the blood, saliva, and bile was not taken.

A CONTRIBUTION TO THE PATHOLOGY OF CHOREA.

CHOREA OF SEVEN YEARS' DURATION; AUTOPSY; LESIONS OF BRAIN, CORD, AND HEART; MICROSCOPIC INVESTIGATION.

BY HENRY J. BERKLEY, M.D.,
OF BALTIMORE, MD.

THOUGH chorea has been classed by the latest writers as a functional trouble, observations have been recorded in which there were palpable lesions of brain and cord, not unlike the present one; and now that Charcot and others have discovered well-marked organic disease in long-standing cases of hysteria, would it be unreasonable to expect to meet it in chorea St. Viti, a state most evidently due to some irritation of the nervous centres. The present example, deficient as it is in several points of the necropsy, may help somewhat to lighten the obscurity.

Alice Bradford, æt. 41, married, and mother of six children, received a severe fright seven years ago on witnessing the committal of a murder. Within a few hours afterward choreic movements began, which soon became very severe, and continued so till the end of her life. No previous history beyond what has already been given could be obtained.

Present state, October 1, 1881: The mental condition has been for a long time previous, and is now one of general weakness. She is exceedingly stupid, irritable, and at times will not answer any question addressed to her. The body is well nourished, food being taken with avidity: its deglutition is accompanied by a peculiar jerking movement of the pharyngeal muscles. Thirst is intense, the quantity of liquid daily drank amounts to several quarts. The skin is frequently covered by an abundant sweat. All the voluntary muscles participate in the spasms, which are very severe, but not more intense on one side than the other. A cup of water placed in the sufferer's hand and directed to be drank exhibits all the bizarre incoördinated movements in perfection, before arriving half-spilt at the mouth. Slight muscular twitchings persist during sleep. Owing to the extreme stupidity of the woman tests of sensation could not be made with any satisfaction, but it is reasonable to suppose that analgesia was probably present, since the severe bruises produced by striking the arms and legs against the bedside during the choreic spasms were never complained of. The voice is almost inarticulate, jerky, and often interrupted by spasms of the laryngeal muscles. The pupils are normal or very slightly contracted, and do not readily respond to light. The heart participates in the muscular unrest, but there are no valvular murmurs. The pulse is irregular and rapid.

About the middle of October she was noticed to be becoming more stupid than usual, and also to manifest less desire for food; this dulness gradually increased till coma became well developed. The respiration, from being normal or slightly accelerated, grew stertorous, and the heart's action became more feeble. Nevertheless, at times the choreic access continued with unabated violence; the patient in the severity of the exacerbation would strike the arms and legs so violently against the bedside as to bring the blood.

A week before death the stertor grew still more intense, and the heart's action more feeble; the sufferer remaining comatose the entire time, so that it was with the greatest difficulty that she could be aroused sufficiently to be given nourishment. The coma continued without break till death, which happened on the second of November. It was marvellous to witness how the muscular unrest continued in the nearly unconscious condition in which she lay for the week preceding dissolution. No delirium was ever manifest during the entire time she was under my charge. No emaciation was ever visible, and the only surface lesions were a large eschar over the lumbar region produced by the constant friction to which the parts were exposed, and a few bruises on the elbows and legs. I should note that the injuries received healed readily when preserved from further irritation.

The nurse tells me that one night, about six weeks before death, during a violent exacerbation of spasm, she forcibly struck the back of her head and neck against the low iron bedstead upon which she was lying.

Post-mortem (*eighteen hours after death*).—Weather cold, rigor mortis well developed, measurements of the limbs showed no difference between them. The cranium was first examined. The skull was symmetrical, of ordinary thickness, with the diploë well marked. The dura-mater was normal, no congestion was visible in it, nor were the sinuses filled with blood. No adhesions were present between it and the pia-mater. The latter membrane was thin, transparent, easily detached from the convolutions, natural everywhere, except between the hemispheres, where there had been old inflammation, the outer two surfaces being adherent for one and a half centimetres above the corpus callosum. Several ounces of serum tinged with blood were found in the arachnoid spaces, mostly collected at the base of the brain. No embolisms or other lesion of the arteries could be discovered.

The brain was considerably atrophied, and did not fully occupy the cranial cavity. The cerebral substance was of a softer consistency than is usually found in so fresh a cadaver. Transverse sections were made vertically from before backward. The puncta vasculosa were slightly dilated, and the gray substance also seemed unnaturally vascular. The white matter, further than its vascularity, was normal, as were likewise the caudate and lenticular nuclei and claustrum. The thalami optici were discolored, of a reddish-brown hue, the right ganglion being much more vividly so than the left. This discoloration (in the vertical sections) was circumscribed over about one-half of the centre of these ganglia, the peripheral portions being intact. The vessels of the thalami were abnormally large and empty of blood. Several drachms of serum escaped when the lateral ventricles were opened.

The cerebellum was normal; the bulb was very small, though its contour was as usual.

Spinal Cord.—The laminæ were cut and the membranes exposed. To the eye, the dura-mater offered no anomaly till the arch of the fifth cervical vertebra was reached; here a subperiosteal abscess had formed (most probably a sequel to the severe blow received by the neck some weeks previously) on the right lamina of the arch, which had opened internally, its contents spreading over the surface of the dura. The pus extended from the diseased vertebra to the base of the skull, the quantity being about half an ounce; none had passed below the fifth cervical vertebra, and none into the cranial cavity. The pia-mater was transparent and normal.

The medulla spinalis was very hard, so much so, as to give a clean transverse section with a dull scalpel, did not project beyond the membranes, was atrophied in its entire length, though particularly so in the mid-dorsal region, where measurements gave transversely seven millimetres, and antero-posteriorly six millimetres. The cervical region in the vicinity of the abscess was slightly flattened from before backwards, though the compression had not been sufficient to produce a trace of softening. The anterior median fissure, especially in the greatly wasted parts, presented a wide V-shaped fissure with its apex upon the white commissural fibres. The cord showed no other macroscopic lesions. The spinal nerve-roots presented no aspect of degeneration.

Thoracic Viscera.—In the larger bronchi appeared evidences of chronic bronchitis; otherwise the lungs were normal. The heart was enlarged, without external deposits of adipose tissue. The muscular walls of both right and left sides were thin, and when taken between the thumb and forefinger crumbled like spleen or liver substance. The valves were perfect in their coaptation, and exhibited absolutely no signs of preëxistent inflammation, having neither lymph nor granulations upon their margins, nor lymph patches on the substance of the valves themselves, nor did they present the slightest trace of thickening. The pericardium and endocardium were sound.

Abdominal Viscera.—All but the kidneys were natural, they presenting a deeply congested appearance.

Portions of the cortex from the ascending parietal, second frontal, and an occipital convolution, white matter, ganglia, cerebellum, pons, heart, and entire spinal cord were preserved for histological investigation. They were carefully hardened in a two per cent. solution of bichromate of potassium, frequently changed, and afterwards in alcohol. The majority of the sections made were stained in ammonia carmine; occasionally osmic acid was used to note if any variations could be detected in preparations by different reagents. The specimens were all compared with normal ones, to prevent mistakes.

Microscopic Examination — the Brain: Cortex and White Matter.—The first striking abnormality that presented was a marked dilatation and thickening of the middle-sized and smaller arterioles of both white and gray matter. In this thickening, intima and adventitia were equally involved. Around many of the vessels, the perivascular spaces were large, occasionally containing amyloid corpuscles. The capillaries were distended with red blood-cells, and here and there around a large number of them, particularly those of the cortex, were minute, almost circular spots, which colored dark brown with osmic acid, and were almost untinged by carmine, evidently minute depots of softening resulting from impaired circulation, containing a few leucocytes, with the cerebral tissues totally broken down, the cortical cells in the ulterior stages of pigmentary degeneration, the nerve-fibres disintegrated. The extent of these necrobioses was very limited, the largest scarcely extending one-thirtieth to one-twenty-fifth cm. beyond the perivascular space. Upon the walls and in the outer sheaths of some of the arterioles, numbers of white blood and granular corpuscles were found.

The cortical cells frequently show a considerable degree of granular alteration, best marked in the smaller multipolar cells, though not confined to them, for a considerable proportion of the large pyramidal cells had totally deteriorated, leaving only a small mass of granular matter; but in others scarcely any variation from the normal could be seen. The processes of the cortical cells that remained sound were well developed, and their nuclei were easily discerned, while, on the other hand, the arms of the altered cells were very fine, or had disappeared entirely, as had likewise many of their nuclei. No difference existed in the cell-state between the motor and sensory portions of the brain; hence no mention is made of special convolutions. There was no appreciable increase of the neuroglia.

A vast majority, though not all, of the nerve-fibres of the brain, both in the motor and sensory regions, exhibited great varicosity, the dilatation in spindle and barrel-form predominating, the knotty swellings being far more frequent than is found in a healthy brain. Frequently through the varicosities the cylinder-axis could be distinctly seen, itself not enlarged, following a wavy course, most frequently towards the side of the swollen medullary sheath, while in other fibres it was very indistinct or visually absent.

Through cortex, white matter, ganglia, and cord, small, reticular, honey-comb spaces, some larger, some smaller, but none of any great size, were met with, crossed at irregular intervals by bands of the tissues proper to whatever region the section under the field of the microscope happened to be from. These vacuolar spots formed irregular lines, sometimes running quite a distance, crossed at intervals by the tissues, at others short, all empty of any discernible substance.

The Ganglia.—The optic thalami claimed the chief attention. The general vascular dilatation and thickening were here very well seen, and in the outer coats of many of the arterioles a considerable nuclear proliferation was observable. Rather frequent minute necrobioses marked the only change in the parts surrounding the vessels, except that in a few lymph-sheaths there were amyloid corpuscles.

The entirely degenerated cells were less numerous than in the cortex; in the majority, the granular matter was confined to a single large lump in one angle, with a few scattered granules through the remainder of the cell, the nucleus clear and distinct, while in the totally deteriorated ones, cell, nucleus, and prolongations had disappeared, leaving only a small mass of pigmented matter. The axes-cylinders of the fibres traversing these bodies were considerably swollen, though the myeline itself presented no unusual variation. No hyperplasia of the neuroglia has yet been noticed. The cerebellum was free from all lesion, except a few vacuoles.

The Bulb: Region of the Pons Varolii.—The intricate labyrinth of nerve-fibres throughout this region seemed to be normal in all respects; the pyramidal and other well-marked fasciæ showed no degenerative change; among the myriad cells in the formatio-reticularis, hardly an altered one could be found; there was no increase of neuroglia; even the bloodvessels did not show nearly so great thickening as in other localities. The appearance was greatly different in the neighborhood of the floor of the fourth ventricle. Irregularly scattered through the majority of the nuclei of origin were numerous cells filled with granular matter, and atrophied greatly; in a number, all vestige of nucleus and nucleolus had vanished; of others, all that remained was a small mass of granular matter, showing where the cell had been.

All the nuclei of the trigemini were apparently sound, while the nuclei proper of the facialis, and that common to it and to the abducens, contained a number of granular atrophied cells among the normal ones.

Superior and Middle Olivary Regions.—The scattered cells of the median portion of the medulla and the nuclei along the median raphė had suffered somewhat more from the disease than those immediately adjacent to the floor of the ventricle, they showing a well-marked alteration in nearly all of their cells, whilst in the superior portions of the hypoglossal and glosso-pharyngeal nuclei a considerable proportion of the cellular elements remained normal. However, in the posterior median nuclei of the acustici, the majority of the cells had degenerated. The nuclei of the vagi, too, showed a large number of altered cells. It is noteworthy that, as the section advanced towards the lower portions of the vagi and hypoglossal nuclei, the cellular change became less and less, disappearing almost in the inferior cells of the accessorius. The olivary bodies, as far as fibres and cellular elements went, were perfectly healthy; their cells were distinct, with nucleus and nucleolus well developed. The nerve-fibres passing to these bodies were also intact.

Inferior Olivary Region.—On each side of the posterior fissure the nuclei of the hypoglossi were clearly depicted, containing not many degenerated cells, while the inferior facial nuclei of L. Clarke, immediately to the outside of the preceding, were much more diseased than any of the other nuclei of origin, all their cells being highly granular and atrophied. Upon the right side the change was greater than on the left, a considerable number of the cells having completely disappeared, judging from the opposite side and from normal preparations. Indeed, throughout the right half of the bulb, the diseased state was somewhat more intense than on the left. The superior portion of the nuclei of the accessorii contained a good many highly altered cells, which progressively decreased in their lower portions. The gelatinous substance and descending roots of the fifth showed no trace of degeneration.

The vessels of the medulla were all dilated, and filled with blood, though without much thickening of their walls. The extreme external part of the olives, but within the cell-layer, is occupied by a large irregular space, partly filled by an arteriole and vein. Around a number of the vessels of the pons and medulla were collections of amyloid corpuscles with an occasional minute area of dead tissues. There was a noticeable proliferation of the neuroglia in the lower tracts of the medulla.

Spinal Cord.—Immediately after the passage of the medulla spinalis through the foramen magnum, the hyperplasia of the connective tissue became exceedingly well marked in the antero-lateral columns, so much so as to give those portions of the cord a decidedly sclerotic appearance, with here and there an occasional patch of true sclerosis, in which the nerve-tubes were reduced to an exceedingly small number, with the axis-cylinders much hypertrophied, and with very narrow circles of myeline around them.

The vessels of this region were much more thickened and less dilated than in the hemispheres or bulb, while many of them were surrounded by amyloid bodies, and some with areas of necrotic tissue around them. The vessels of the gray matter seemed not so greatly involved, though in a single section a large vein crossed transversely the anterior cornu, surrounded by amyloid bodies and a trace of softened substance.

The cells in all the different tracts of the horns looked to be nearly normal. The central canal was entirly obliterated by an abundant proliferation of its epithelium.

Cervical Enlargement.—The cell lesions were better marked here than in the higher sections of the cord; a few here and there had entirely degenerated, without nuclei or protoplasmic processes, with their bodies reduced to a small mass of granular matter. A small number of the cells presented a nodular aspect, their prolongations ending close to the body, their nuclei present, though seen very indistinctly. The greater portion of the cells of the horn contained some granular matter, and showed an unusual yellowish tinge. In one gray column I counted twelve very granular and nodular cells amongst a total of seventy-three contained in the horn.

The hyperplasia of connective tissue and Dieter's cells is here considerably less than in the higher tracts, but there is still an abundance of it. The change in the vessels seems to be much in proportion to the amount of neuroglia. The central canal continues the same—that is, occluded.

Dorsal Cord.—The increase of connective tissue and Dieter's cells again became much more noticeable, heavy trabeculæ extending from periphery to centre, densest in the anterior and lateral columns. The nerve-tubes were much scarcer than is usual, compared with normal preparations, their places being filled with neuroglia cells and trabeculæ, the tubes themselves showing some evidences of sclerosis in an occasional swelling and irregularity of the cylinder-axes, and a varicose or diminished state of the myeline. Longitudinal sections showed the absence of the axis-cylinder from its sheaths in a small proportion of the fibres. The spindle swellings were much more infrequent than in the brain.

The thickened vessels still continue, and are even more numerous than in the other regions previously examined. The centre of the gray cornu on one side is occupied by an arteriole having a lumen only one-third the transverse diameter of the vessel. Amyloid bodies are still found.

The cell degeneration in the dorsal cord is confined to an occasional one in each section, principally in the median and postero-lateral groups. The central canal was entirely closed in all preparations of the dorsal cord. Throughout the entire gray columns, the nerve-fibres running longitudinally in them had to a large extent vanished.

Lumbar Region.—The augmentation of the neuroglia has now comparatively subsided, being only thinly scattered over the lateral and anterior tracts. The fasciculus of Türck on the right side showed the sclerotic condition more than on the left. The vessels are not so highly thickened as in the superior portions of the cord; the artery in the centre of the gray horn still continues, and holds the same course as in the dorsal tract. The spots of softening around the vessels, which had become more and more scarce as we descended the cord, now entirely disappeared, as also did the vacuolæ.

The motor cells of the anterior horns, on the contrary, revealed the degenerative process more plainly than in any other region. Frequently whole groups of cells appeared diseased, and it was infrequent to meet with an approximately normal one, an event not before met with in any portion of the cord. The central canal is still occluded. Through the entirety of the medulla spinalis the fasciæ of Goll and Burdach were much less involved by the increase of neuroglia, and, indeed, in many places had been completely spared. The posterior horns also were normal throughout the cord.

Nerve-roots.—The root-fibres of the trigeminus were perfectly free from any abnormal condition. The roots of the spinal nerves showed a partial granulo-fatty degeneration of the sheath of Schwann, though the axes-cylinders were normal in all respects. Very few of the nerve-tubes had escaped the alteration entirely.

The Heart.—Isolated fibrillæ of this organ revealed slight fatty degeneration of the primary muscular fasciculi. The transverse striation was also indistinct. Teasing was performed with great difficulty, the muscle breaking down into irregular masses under the slightest pressure of the needles.

Résumé.—In the brain, general dilatation and thickening of the arterioles; small gangrenous spots around many vessels; amyloid corpuscles in the lymph-sheaths; vacuoles in white and gray matter; varicosities of the sheath of Schwann, and absence of axis-cylinders in the nerve-fibres; and complete pigmentary degeneration of a large number of the cortical and ganglionic cells, with loss of the prolongations.

In the bulb, the vascular lesions are much diminished; necrobioses rare; amyloid bodies in some lymph-sheaths; alteration of the nuclei of the facial, abducens, hypoglossal, glosso-pharyngeal, acusticus, vagus, accessorius, and inferior facial of L. Clarke, and other groups and scattered cells centrally situated along the median raphé.

In the superior cervical cord, increase of vascular changes; necrobioses frequent; partial sclerosis of antero-lateral columns; ganglionic cells comparatively healthy. In the cervical enlargement, increase of cellular change, with diminution of the connective tissue one.

In the dorsal cord, immense augmentation of the diffused sclerotic state in the anterior and lateral columns; vessel-walls much hypertrophied; little change in the ganglionic elements; varicosities of the medullary sheaths, with an occasional swelling of the axis-cylinder, and its complete absence from the fibre in others. In the lumbar cord, degeneration of the majority of the motor cells; increase of neuroglia less marked. Occlusion of the entire central canal; posterior horns sound throughout the cord; no embolisms in any of the vessels; granulo-fatty changes in the sheath of Schwann in the spinal nerve-roots: fatty degeneration of the muscular fibrillæ of the heart.

Commentary.—The histological results of the present observation do not differ widely from ones that have been previously made in chorea. The cell degeneration, thickening of the adventitia and intima, or dilatations of the vessels, increase of the neuroglia, etc., have all been seen by other observers, notably Rokitansky, Steiner, Dickinson, Elischer, and Golgi; but what has not been previously mentioned so far as I am able to discover, is the inflammatory state of the nerve-tubes of the brain and cord, the vacuolæ, the degeneration of the nuclei of origin in the bulb, the fatty state of the heart. Nor has the same state of the spinal root-fibres been noticed, except in the case of Elischer,[1] who found increase of the neurilemma, and the nerve-fibres covered as with hoar frost and glassy; a condition which, though not analogous, is yet sufficiently so to show that there is an alteration in the peripheral nerves. Contrary, too, to the reports of Elischer[2] and Golgi,[3] the posterior white columns were, to a great extent, saved from the general diseased condition of the cord.

In the pigmentary alteration of the nuclei of the vagi, can we not see an explanation of the common implications of the heart in the choreic movements, with or without valvular trouble; *the disease causing loss of the inhibitory power of the pneumogastric nerve, hence the irregular action of the heart muscle?*

Again, the cell degeneration and vacuolous state (showing atrophy of the cerebral matter) of different portions of the encephalon, particularly the cortex, may readily account for the mental alienation almost universally seen in St. Vitus' dance when of any duration, and for the fact that mania and paralytic dementia sometimes follow it.

In concluding, I sincerely thank Dr. I. Bermann for his kind assistance in corroborating and confirming my results of the examination of the cerebrospinal axis.

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[1] Elischer, Virchow's Arch., Bd. 61.

[2] Elischer, loc. cit.

[3] Golgi, Revist. Clin., 1874, cited by Von Ziemssen, Ziemssen's Cyclopædia.

A CASE OF HEPATIC ABSCESS DISCHARGING THROUGH THE BRONCHIAL TUBES; RECOVERY.

By JAMES ORR, M.D.,
OF TERRELL, TEXAS.

A. D., aged 36, stout and healthy, after several days' illness, sent for me March 8, 1882. I found him restless and anxious; skin hot and dry; temperature 103°, pulse 90, respiration 22; intolerance of light and noise; nausea without vomiting; urine scanty and high colored; tongue dry and red; conjunctiva slightly yellow; intense pain over stomach and right hypogastric region; bowels constipated.

The case was treated as one of gastro-duodenitis; ordered pills of morphia one-sixth of a grain, conium ext. one-half grain, and ext. hyoscyamus two grains, every four hours; also ten grains of acetate of potassium in two drachms of liq. ammon. acetatis every four hours. Diet light, and bowels to be moved every alternate day by enema.

Under this treatment, he improved rapidly. all his bad symptoms subsiding so much that he sat up on the twelfth for an hour or more. The next day, however, his fever returned, and grave symptoms manifested themselves at once, his temperature running up to 104°; pulse 120, respiration 28; intense nausea, with vomiting and diarrhœa; increased pain and tenderness over region of stomach and liver, the latter being swollen to nearly double its usual size, and very tender on pressure. Ordered morphia, grain one-sixth, and oxalate of cerium, grains five, for relief of pain and nausea, as occasion required; added full doses of tinct. digitalis to the mixture of acetate of potassium and spiritus Mindereris, previously given; also pills composed of ext. nux. vomica one-eighth of a grain, ext. conii. one-half grain, and ext. hyoscyami two grains every four hours. Blister three by four over liver.

March 15.—Nausea and vomiting have ceased; nervous symptoms less troublesome; pain under control; other symptoms unchanged, except the patient is completely discolored by jaundice, his entire body being as yellow as an orange. Continued treatment as above, substituting aconite for digitalis in the febrifuge, and increasing the area of blister over liver.

18th.—All symptoms improved, only the liver does not decrease in size. Ordered iodide of potassium in calisaya as tonic and alterative, with careful attention to diet and regimen. The skin and kidneys were kept rather active in their work of elimination, in which they were eminently successful, all the discoloration having disappeared in ten days, but in the matter of reducing the size of the liver, I was not only doomed to disappointment, but soon learned that I had an abscess to deal with. The acute symptoms having subsided, tonic treatment was now resorted to, a succession of blisters applied over the diseased organ, and the morphia with oxalate of cerium continued for relief of the pain and nausea, which were constantly recurring. Under this treatment, the general condition improved, but no sign of adhesion could be detected, nor could any fluctuation be felt.

April 9.—Discovered acute circumscribed pneumonia in the lower lobe of right lung, which, however, gave but little trouble and soon yielded to treatment. On the 17th I was called away and did not return till the 22d, when I found my patient very much worse, great prostration having set in, while his countenance wore a livid and anxious aspect; temperature 100°, pulse 140, respiration 30; complained of great pain in the lower part of right lung. Has a constant distressing cough with expectoration of tough glairy mucus in small quantities. While examining him he coughed up about a teaspoonful of what appeared to be almost pure bile, which led me to the conclusion that the abscess was going to discharge through the bronchial tubes. From this time the cough became constant and harassing, the expectoration rapidly increasing; in twelve hours it amounted to a pint of what seemed to be an admixture of bile and pus with a few shreds of broken-down tissue.

24th.—Total amount of expectoration up to this time is two quarts, the character of which has not changed; his constant effort to expel the pus from his bronchial tubes has greatly reduced his strength despite the large quantity of brandy and ammonia given. Temperature 98°, pulse 140, respiration 46; tongue yellow from expectoration, skin cool and moist, urine scanty and high-colored, bowels constipated, considerable thirst and anorexia. The liver, which has all along been swollen and hard, has greatly diminished in size with a distinct depression several inches in diameter, having well-defined margins, indicating where the abscess existed. During the day another pint of matter was expectorated, making five pints in all up to this time. The cough and expectoration now began to subside rapidly, and by May 8th had ceased altogether, the patient having greatly improved under the judicious use of wine of pyrophosphate of iron, Huxham's tincture, and dilute phosphoric acid. At this time, March 1, 1883, he enjoys better health than ever before, presenting no trace of his former disease, except a slight depression over the margin of the liver, and somewhat prolonged respiratory murmur in right lung.

The rapidity with which this very large abscess emptied itself leaves no doubt that a bronchial tube of considerable magnitude was perforated, to reach which the pus was forced to travel some distance in a direction contrary to gravitation, which taken in connection with the rapid and complete recovery of the patient, marks it as a case of no little interest to the practitioner and illustrates the wonderful curative powers of nature when given a fair chance.

MEDICAL PROGRESS.

Splenectomy.—Rather more than a year ago Mr. Herbert Collier published a table of twenty-nine cases of removal of the spleen, showing eight recoveries, but an invariably fatal result when the splenic disease was associated with leucocythæmia. From this fact, Mr. Collier drew the inference that the operation was not justifiable in cases of leucocythæmia. In some quarters exception was taken to this view, and it was pointed out that the operation had been employed when the disease was too far in advance, and that it was wrong to infer that the same mortality would attend it if performed at a quite early period and before the general blood changes were far advanced. A case has occurred in the practice of Franzolini, of Turin, which appears to support this view. His patient was a young woman, twenty-two years of age, whose illness commenced with pain and distress in the left side of the abdomen two years before she came under his care; after eighteen months a large splenic tumor was noted; and some months later an increase of leucocytes in the blood, which at the time of the operation were five times in excess of the normal. The spleen was removed through an incision in the linea alba, its artery and vein were ligatured separately; it weighed after removal and when emptied of blood fifty-two ounces. The leucocythæmia gradually subsided, and had disappeared altogether in four months. This case is certainly encouraging. Dr. A. Blum has recently written an article upon the whole subject of excision of the spleen in the *Archives Générales de Médecine.* His conclusions, based upon a study of the recorded cases, are that while the operation of splenectomy is practicable and is compatible with complete recovery, it is so often fatal from hemorrhage or shock that it is but rarely indicated. He considers that it is not justifiable in cases of splenic cysts, because they can be cured by other and milder measures; or in cases of hypertrophy, whatever its cause; or in cancer of the organ, on account of the very high mortality. But he points out that in cases of movable spleen with marked and severe symptoms, the operation is comparatively easy and successful; while in cases of hernia of the spleen following an injury, the removal of the herniated portion is so successful that the surgeon is fully warranted in undertaking it.—*The Lancet*, July 28, 1883.

Jamaica Dogwood.—Prof. Ott, after a number of experiments with this agent, concludes that the sleep produced by it has the same characteristics as that produced by bromide of potassium. He has experimented on himself with it, and found that after taking a spoonful of the fluid extract of the bark, sleep came on quickly, and lasted for three hours. On awakening, there were no disagreeable sensations, such as are felt after taking opiates. Its active principle produces mydriasis, not in the same manner as atropine, but by an energetic action on the vaso-motor nerves. The fluid extract may be given in doses of about fʒss. It may be combined with double its amount of syrup of bitter orange-peel, or with double its amount each of distilled water and syrup.—*Therapeutic Gaz.*

Prophylaxis of Puerperal Fever.—The paper by Swiecicki, in *Centralbl. f. Gynäk.*, as to the time during which a physician should abstain from obstetrical practice after having made an autopsy, or after attending a case of puerperal fever, has brought out a communication from Hermann Löhlein to the Gesellschaft für Geburtshulfe und Gynäkologie zu Berlin, in which he replies to Swiecicki. It will be remembered that Swiecicki concluded that the proper time for this self-quarantine was eight days. It is clear, says Löhlein, that if this rule be rigidly carried out, grave consequences and great inconveniences will result. Hospital physicians would be unable in many cases to perform their duties, and medical students who are dissecting would be excluded from hospitals; for if the performance of an autopsy is a sufficient reason for quarantining a physician, the opening of an abscess, or examining a case of cancer of the os, is also sufficient, and endless inconveniences would result from this practice. He believes that strict cleanliness and proper antiseptic precautions are all that are necessary.—*Centralbl. für Gynäk.*, No. 23, 1883.

FRITSCH, in commenting upon Löhlein's paper, upholds him. He has followed these methods for ten years, and has had no serious cases. In 1873 he attended his brother for five months, who had coxitis and profuse attendant suppuration. After each dressing, he thoroughly disinfected himself with a six per cent. solution of carbolic acid, and though during this time he attended two hundred and forty obstetrical cases, there was not a single death, and no case of severe illness.—*Idem.*

THE TUBERCLE-BACILLUS IN THE AIR.—DR. C. THEODORE WILLIAMS recently selected one of the ventilation shafts at the Brompton Hospital for Consumption in which the flues of several wards converge, and in which extraction takes place at the rate of 300 to 400 feet a minute. In this current he suspended glass plates smeared with glycerine for a period of five days. The plates were then washed with distilled water, the fluid mixed with a little mucilage and evaporated down to half, and the residue tested for bacilli, which were found in fair abundance.—*The Lancet*, July 28, 1883.

STATE OF THE GUMS IN PREGNANCY.—M. DELESTRE has observed that not only in pregnancy, but during the menstrual periods, the gums in the female are congested, swollen, and softened. The gingival troubles commence about the second month of pregnancy. Didsbury describes three degrees of gingivitis of pregnancy. In the third, the gums are so inflamed that they have a reddish-violet color, are swollen, and the interdental portions are clearly shown. The tartar and epithelial *débris* accumulate around the teeth. This inflammation may extend to the alveolo-dental periosteum, for the teeth seemed to lose their lime, become elevated, and may fall out. This gingivitis is situated particularly in the anterior portion of the jaws; it rarely goes back of the canine teeth. Only the convex surface of the jaws is attacked. The treatment should be energetic; the tartar should be removed and the inflammation treated by astringent preparations, chlorate of potash, etc., and in grave cases with tincture of iodine, chromic acid, and hydrate of chloral mixed with some astringent tincture.—*Journal de Méd. de Paris*, June 23, 1883.

FEEDING IN CHOLERA.—DR. B. WARD RICHARDSON, in a recent communication to the *Medical Times and Gazette*, Aug. 4, 1883, says that he has been led to the conclusion that every fatal sign and every danger in cholera is due to the one simple act of the removal of water from the tissues, and especially from the nervous structures; to disturbance of nervous action by that removal; and to excessive reduction of heat, sensible and latent, from the body.

The treatment suggested during collapse, and based on these views, introduced the consideration of the plan of feeding by the veins, and of intra-peritoneal injection.

The lines of treatment, as they appeared and, with some additions, appear to him, were much the same as should be pursued in cases of exposure to extreme cold, where the body has been brought to several degrees below the natural standard of heat, and where, owing to the cold, the surface of the body is blue, the blood all but stagnant, and the consciousness reduced or lost. In such a case it would be folly to charge the affected person with cold, iced drinks, for by such means the temperature of the body would possibly be further reduced. In such a case it would be folly to plunge the person into a hot bath, for although there might, thereupon, be a sudden reaction, there would be no source of supply of heat, but merely a heat shock or stroke, under which the remaining vital powers would be called into sudden activity, to cease directly in death—the glacial form of inaction and rigidity, which is not of necessity fatal, being transformed into the pectous change, or true rigor mortis of the nervous, vascular, and muscular fluids, from which there is no known mode of resolution. In such a case it would, it seemed to him, be also useless to place the affected person in the hot-air bath, because exposure to heated air, under conditions in which the capacity of the blood to circulate freely is lost, would only tend to increase the danger of coagulation of the blood in the body, and, by quickening evaporation of water from the respiratory surfaces, to intensify the exhaust of water from the body.

The first point of practice in the collapse was, then, he thought, to place the sufferer in a medium temperature, not below 50° and not above 60° Fahr., so that neither the chilling action of cold nor the exhausting action of heat should exert a destructive influence; though heat, he thinks, is really the more dangerous of the two—a suspicion which the experience of cholera in tropical temperatures too fully confirms.

The next point of practice in the stage of collapse, which was suggested as the most rational, was that of feeding. He himself has succeeded in administering a quart of fluid per hour to the person stricken with cholera; and as the complaint of thirst is a common complaint there is never much difficulty in the persuasion.

The fluid to be supplied should, he holds, on all rational grounds, be one that shall fulfil two purposes. It should not make the body cooler by extracting heat, it should not produce local reaction by instant excess of heat; but it should be supplied after it has been raised from fifteen to twenty degrees above the animal temperature. I had often seen vomiting re-excited after that symptom had considerably decreased from the simple process of administering a drink too heated or too stimulating.

Taking advantage of the fact that crystallizable fat when mixed with albumen can be dissolved by the heat of water, which heat it fixes in becoming soluble, and gives up again on solidifying, he set to work to produce a food having the properties named. After numerous attempts the following proved most successful:

Take of pure stearine two ounces by weight; of best fresh butter, two ounces; of whites and yolks of eggs, well beaten up, eight ounces; of carbonate of soda, twenty grains; of common salt, eighty grains; of distilled water, two ounces.

In preparing the food, first dissolve with heat the stearine and the butter until they are both melted, then add the carbonate of soda and common salt to the eggs, and when these salts are dissolved in the egg-fluid, mix it with the oily fluid, taking care that the latter is not of a temperature above 140° Fahr. Let the whole cool to a soft consistence, and finally on a slab or a board, rub in the water with a broad spatula. The compound may now be placed in a wide-mouthed jar; in a little time it settles into a moderately hard mass, and is ready for use.

In administering this compound, take one ounce, place it in a large breakfast cup, and rub it up equally with a teaspoonful of glycerine or a teaspoonful of honey. Next pour upon the mass three ounces of distilled water, *actually boiling*, and incorporate well. The solid substance will now quickly and evenly dissolve, and will be at once so cool that it can be taken as a pleasant drink, like a broth in flavor.

Feeding by the Veins.—When feeding by the mouth is impossible, the next indication in the stage of collapse is to feed by the veins. In using this term he wishes to make a difference between mere injection of the veins with watery fluid and feeding by the veins. His proposition was, and is, *to feed*—to feed in the same way, as nearly as can be imitated, as the venous system is fed in health from the alimentary canal through the thoracic duct—slowly and steadily, so as to supply food as well as water.

Up to this time we have been content to inject warm saline solutions into the veins. The results have been often astounding, almost always delusive. In some instances it has seemed as if the injection has restored the dead to life, but the collapse has only too surely recurred.

The reason why certain immediate but not lasting benefits have followed these injections is, that they have been injected after the fluids used have been heated up to, or above, bloodheat; the heat thus supplied has been the underlying basis of the transient success.

ACTION OF MORPHINE ON THE INTESTINE.—L. M. PETRONE, in the course of some experiments on the action of sodium, potassium, and ammonium on the muscular fibres of the intestine, has indirectly demonstrated that morphine does not act on the terminal filaments of the splanchnic nerve, or upon the nerve trunks, but upon their central origins. The question may then be asked, Is the action of morphine on the intestine similar to that of digitalis on the heart? Nothnagel has answered this affirmatively; he has demonstrated experimentally that morphine, like digitalis, moderates, checks, or suspends nerve action in small doses, and in large doses paralyzes it. Nothnagel's experiments were repeated by Petrone, who concludes that small doses of morphine stimulate the terminal filaments of the splanchnic, whilst large doses paralyze them.—*Annali Univ. di Med. e Chir.*, June, 1883.

FIBROMA OF THE VAGINA.—In the *Boston Medical and Surgical Journal* for August 16, 1883, DR. EDWARD T. CASWELL, of Providence, records the case of a young lady, who was soon to be married, and who had been aware of some obstruction in the vagina for about two years. Latterly the obstruction had seemed to increase. There had been no pain, and no disturbance of the menses. Some inconvenience was experienced in walking, and some in sitting. On examination he found a tumor in the middle line of the anterior wall, over the course of the urethra, as large as a pigeon's egg, its anterior extremity being about three-quarters of an inch back of the meatus. It was not sensitive to pressure, and had a slightly elastic feel. An operation was advised for many reasons, not the least of which was the relief from anxiety that it would afford the patient in view of her approaching marriage.

A single incision in the middle line enabled him to easily enucleate the tumor, which measured in its long diameter about one and a half inches, and about three-quarters of an inch in each of its other dimensions. Under the microscope it proved to be a fibroma. There was but little hemorrhage, and the wall of the urethra was uninjured. Two or three sutures of catgut, with a small piece of drainage-tube, some absorbent cotton, and a napkin, were all that was required in the way of dressing. Carbolized injections were freely used, and the catheter passed for three or four days. The tube was removed on the third day. The recovery was uninterrupted, save for a slight hemorrhage on the day after the operation, which was checked by an injection of hot water. The wound was entirely healed by the eighth day, and the patient dismissed on the tenth. Except for the slight discharge of the first few days the young lady was conscious of no departure from her usual condition of health.

RESECTION AND DISARTICULATION OF THE INFERIOR MAXILLA FOR CENTRAL SARCOMA; EXTIRPATION OF THE PAROTID AND SUBMAXILLARY GLANDS.—PROF. ANDREA CECCHERELLI reports the following interesting case occurring in the surgical clinic of the Royal University of Parma. S. C., æt. 17, peasant, of robust physique, well formed, no bad history. Parents always healthy. At the age of ten years he noticed a small induration about the middle of the right half of the inferior maxilla. It commenced spontaneously, and caused no pain, even after prolonged examination, and though it kept on growing, the patient had not thought that it could be removed. He entered the clinic on December 3, 1882, at which time the tumor was of very large size. The swelling commenced at the mental symphysis, extended along the whole body of the bone, and about a third of the distance up the ramus. The mass was hard, resistant, smooth, and immovable, It was so large that the patient could only open and close his jaws with great difficulty. The mucous membrane of the mouth was sound and freely movable over the tumor, but very much distended. The diagnosis of central osteo-sarcoma of the inferior maxilla was made. On Dec. 5th, Ballini's operation was performed, the bone being resected at the symphysis and disarticulated. Cicatrization proceeded normally and without a bad symptom until about the end of December, when the part began to have a suspicious look.

It was noticed at the time of the operation that the parotid gland was unnaturally firm. This firmness increased so rapidly that it was found necessary on January 11th to extirpate the right parotid, submaxillary, and some cervical glands. The patient left the clinic, cured, on February 20th.

In the same article Ceccherelli reports a case of resection of the inferior maxilla for epithelioma, the external method being used in this case also. The patient entered the Hospital on Dec. 4, 1882, and was discharged on January 11th. No recurrence up to date. In both cases the diagnosis was confirmed by microscopic examination of the tumors.—*Lo Sperimentale*, June, 1883.

NEPHRITIS FROM COMPRESSION OF THE URETERS IN CANCER OF THE UTERUS, WITH CONSECUTIVE HYPERTROPHY OF THE HEART.—It is not rare to find, says M. G. ARTAUD, at the autopsy of women dead of cancer of the uterus, either one or both ureters compressed or obliterated by the neoplasm. This compression or obliteration causes dilatation of the ureter above, distention of the pelvis and calices of the kidney and alterations of the renal substance, which vary according to the intensity or duration of the compression; and in these cases it is not rare to find in women who die in a state of extreme anæmia, a hypertrophy of the left ventricle of the heart, which has been caused by the secondary nephritis. After having studied these cases, Artaud draws the following conclusions:

1. In the course of cancer of the uterus there may be developed, from compression of the ureters, kidney lesions, of which the principal characteristics differ according to the degree and duration of the compression.

When there is but little compression, the size of the kidney is normal or slightly increased. The histological lesions consist in a nuclear infiltration about the uriniferous tubules and the glomeruli and small arteries, a hypertrophy of the glomeruli, and a dilatation of the convoluted tubes, of which the epithelium has undergone fatty degeneration. The size of the collecting tubes is normal, or nearly so, and the epithelium unaltered.

In cases of long-continued pressure, where the ureter and pelvis of the kidney are very much dilated, the kidney becomes atrophied, and the degree of atrophy is in direct proportion to the dilatation of the ureter and pelvis. The pathological lesions consist in the passage to the fibrous state of the nuclear infiltration observed in the beginning of the disorder, and in the breaking down of the straight and collecting tubes, the epithelium of which has undergone embryonic change. The glomeruli undergo either fibrous or cystic change and the convoluted tubes present the same epithelial alterations as in the first stage.

Kidney lesions produced by compression of the ureter in the course of cancer of the uterus frequently bring on hypertrophy of the heart, which is exclusively confined to the left ventricle. This hypertrophy is rarely accompanied by interstitial nephritis. This forms another variety, hitherto but little studied, of cardiac hypertrophy coming on in the course of affections of the urinary organs. — *Gaz. Méd. de Paris*, August 4, 1883.

Fusible Metal for taking Casts of Anatomical Preparations.—Dr. J. S. Mixter recently read a paper on this subject before the Boston Society for Medical Observation. The methods used by Hyrtl for corrosion preparations do not answer well in our climate, as they are apt to melt in the hot summer weather. Henle used metal for casts of the ear, and Sands for those of the urethra, but no use seems to have been made of such metal for the finer injections of the bloodvessels. The compound used is known as Wood's metal, and consists of bismuth, seven parts; lead, four; tin, two; and cadmium, one. This will melt at a temperature of from 140° F. to 160° F. It should be melted under water which has been previously boiled, in order to prevent the rapid oxidization which takes place when it is heated in the air. After having heated the organ to be injected to 140° F. the metal is forced in by means of a syringe, and the part left to cool for some time, for when near the melting point it becomes quite brittle, but when cooler it can be handled quite safely. After having injected and cooled the organ it is immersed in a warm concentrated solution of caustic potash for some two hours, when the tissues become softened, and can be washed away with cold water.

Very beautiful preparations were shown of injections of the vein and artery of a human kidney, of the fœtal circulation of a human child at birth injected through the umbilical cord, also preparations of the lungs of a sheep and a cat injected through the trachea, and specimens from the liver and kidney of animals. Dr. Mixter has also made some injections of bone by placing the specimen, immersed in the liquid metal, under the bell of an air-pump; the air was then exhausted, withdrawing the air also from the interior of the bone; on readmitting the air to the bell the metal was forced into the finer bony openings, and a cast was thus obtained. It was often necessary to soak the bone for a week in the strong potash solution or even to use strong sulphuric acid.—*Boston Med. and Surg. Journal*, August 16, 1883.

Toxic Effects of Albuminous Urine.—Recently, M. Doléris has made a second communication to the Société de Biologie on the toxic properties of albuminous urine collected from pregnant women, and containing microbial elements. Inoculation of the culture liquid obtained by using these elements has produced the same microbes in the blood of inoculated animals, with convulsive seizures before death.—*Gaz. Hebdom.*, July 27, 1883.

A New Method of Detecting the Tubercle-bacillus.—Dr. C. Theodore Williams has lately adopted a modification somewhat resembling Rindfleisch and Chill's, which still further simplifies and shortens the process. The cover-glass with the dried sputum thereon is floated in a few drops of magenta aniline in a watch-glass, and heated over a flame till vapor is seen to rise from the surface. The watch-glass is then removed and allowed to cool for two or three minutes, the cover-glass is afterwards treated successively with nitric acid (1 in 4), with distilled water and a weak solution of alcohol. It is dried and mounted in Canada balsam, the whole process not exceeding eight minutes. —*The Lancet*, July 28, 1883.

Sanitary Value of the Electric Light.—Prof. Max Pettenkoffer has recently given a detailed opinion of the electric light in theatres, in which he draws the following conclusions: 1. The electric light hinders, to a great extent, the overheating of the air in the theatre. 2. Of course, it does not render ventilation of the theatre superfluous, but affords in itself a more thorough means of ventilation than gaslights, which contaminate the air of the room by the heat and products of combustion, both of which are avoided by using the electric light.—*Wien. Med. Presse.*, July 29, 1883.

Antisyphilitic Properties of Cascara Amarga, Baroba, and Berberis Aquifolium.—For the past four years Dr. Frohling, of Mexico, has used cascara amarga, the bark of a tree of Honduras of the genus picramina as an antisyphilitic. The fluid extract is given in doses of gtt. xl–l to an adult in secondary syphilis. The symptoms quickly disappear, and the tonic action of the remedy is striking. In a case of specific iritis, Reuling has seen a manifest amelioration within three days—the dose being gtt. xl of the fluid extract three times a day. The instillations of atropia were stopped and cascara amarga used alone.

The leaves of the Brazilian baroba, the extract of which is officinal in France, have been used by C. Weber, of Leipzig, and by Edson, in obstinate forms of secondary syphilis, gtt. xv–ʒj being given in a day. It is a valuable antisyphilitic tonic and alterative.

According to Dr. Baird, of Tennessee, the berberis aquifolium (Oregon grape root), is a valuable remedy in secondary syphilis. He has prescribed it in two cases in syrup or a solution containing ʒxv of iodide of potassium—dose, a dessertspoonful in coffee three times a day.—*L'Abeille Méd.*, Aug. 6, 1883.

Dilatation of the Cervix in Hysterical Opisthotonos.—A young woman was recently brought to von Nussbaum's clinic, who one year before had had the operation of slitting the cervix performed on account of amenorrhœa and hysterical cramps. The operation had given relief, but was not permanent.

The cervix felt hard and cartilaginous, and the os was closed. The cramps had returned and were of the true opisthotonic type. Von Nussbaum repeated the slitting, and inserted his index finger into the uterine cavity; he then thoroughly cauterized the lips of the wound with Paquelin's thermocautery. The operator hopes for the best results from this treatment, and so far the cramps have not returned.—*Allgem. Wien. Med. Zeitung*, July 31, 1883.

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SATURDAY, AUGUST 25, 1883.

THE RESULTS OF THE QUININE PILL ANALYSES.

THE profession has just been favored with another analysis of quinine pills which fully confirms the prior results of THE MEDICAL NEWS Commission. Last April, when *The Pharmacist* published Prof. Diehl's analysis, it offered to produce the remaining pills of the packages from which the samples were taken, if the manufacturers so desired, for another analysis under their supervision. This offer was not accepted by any of them, with the single exception of Messrs. McKesson and Robbins, "seemingly on the ground," according to *The Pharmacist*, "that it was forgotten by the masses, and, therefore, it was better to let it remain unsettled than to again try an investigation."

After the successive declinations of Prof. Diehl, Prof. Prescott, Mr. Charles Rice, Dr. Squibb, and Dr. Mott, Messrs. McKesson & Robbins finally secured the services of Mr. Wm. Habirshaw, who is one of the New York Custom House analysts of cinchona bark, as an expert to witness the analysis to be made by Dr. Edward Polenske, the chemist of Messrs. McKesson & Robbins. The analysis was made in New York by Dr. Polenske in the presence of Mr. Habirshaw and Prof. Austin as chemists, Mr. Cowdrey, the editor of *The Pharmacist*, and two representatives of the firm of McKesson & Robbins. The herapathite test, as advanced by Prof. Diehl, was used, it being modified only "where it was considered that Prof. Diehl had erred." The results are given in *The Pharmacist* for August.

Four samples were analyzed. To test the correctness of the method, the accuracy of calculation, and the expertness of the chemists in manipulation, Mr. Cowdrey had two samples of pills carefully made in Chicago with known quantities of Powers & Weightman's sulphate of quinine, and then gelatine-coated. No. 1 consisted of one hundred pills made from two hundred grains of sulphate of quinine. No. 2 consisted of one hundred pills made from two hundred grains of a mixture of sulphate of quinine 95 per cent., quinidia sulphate 2½ per cent., and cinchonidia sulphate 2½ per cent. No. 3 was the remainder of the original sample analyzed by Prof. Diehl; and No. 4 was some two-grain quinine pills of *recent manufacture* taken from McKesson & Robbins' stock-room. Sample No. 3, upon analysis not representing the amount of quinine that Messrs. McKesson & Robbins thought it should, and "there being a question if the alkaloid bearing ether had not inadvertently been lost by the too rapid boiling of the ether while on the water-bath," it was decided on the following day to make from the same sample another analysis, which is numbered 5.

The results per two-grain pill are given in grains in the following table:

No. of Sample.	Total Quinine Sulphate, $8H_2O$.	Total Alkaloid as Sulphates, $8H_2O$	Per cent. of Foreign Alkaloid.	Deficiency of Total Alkaloids.	Deficiency of Quinine Sulphate.
1	1.992	2.090	.46		.008
2	1.893	2.052	.77		.107
3	1.782	1.869	.47	.131	.218
4	2.036	2.083	.22		
5		1.963			

No. 5 shows a larger amount than No. 3 of total sulphate alkaloids, although still deficient in weight. For some reason, the amount of sulphate of quinine present in it does not appear to have been calculated.

It will be observed that in these new analyses the manufacturers have the benefit of the increased weight resulting from calculating the sulphates as containing eight equivalents of water of crystallization, which are allowed by the *U. S. Pharmacopœia*, although its standard officinal formula gives seven equivalents, and the calculations of THE MEDICAL NEWS analysis were made on this basis. In commenting on this point, *The Pharmacist* says: "It is plainly evident that eight molecules of water are more than a fair allowance for water of crystallization, as it is evident that the bottle of Powers and Weightman quinine did not contain quinine with over seven molecules of water. The figuring of results on the basis of eight molecules increased the amount of alkaloid in 1 and 2 beyond the amount actually present; but if the *Pharmacopœia* allows eight molecules of water of crystallization, we can hardly object to the manufacturers claiming the utmost limit of the *Pharmacopœia*, even though the quinine of commerce contains less than that amount."

The foregoing results, we suppose, are accepted as correct by Messrs. McKesson and Robbins, since they were obtained by their own chemist. They are certainly very satisfactory to us, since they closely agree with our own results, and are strongly confirmatory of the accuracy and correctness of our analysis, which gave for the McKesson & Robbins' two-grain pill 1.76 gr. calculated with seven equivalents of water of crystallization.

IT is with great satisfaction, too, that we note the beneficial results to both the profession and the public which have followed the publication of THE MEDICAL NEWS analysis. It was to be anticipated that the houses whose products were found to be deficient would carefully investigate every point in their pill manufacture, and even revise their working formulæ, if found necessary to bring their products fully up to the standard which is claimed for them. In the case of Messrs. McKesson & Robbins, this appears to have been done, and it is with very great pleasure that we note that a recently manufactured sample taken from their store-room was shown by the analysis just made to contain the full weight of sulphate of quinine, and we have no doubt that if the pills of recent date of other manufacturers had also been examined, a like result would have been found. Thus the profession and the public, as well as the manufacturers, will be the gainers by the greater care which is now being bestowed upon the character of the laboratory-products of our large manufacturing pharmaceutists.

WHEN, last December, THE MEDICAL NEWS published the results of its analysis of certain leading brands of quinine pills, we observed, without any special surprise, that little, if any, notice was taken by our contemporaries of the rather startling results, in spite of the importance to the profession and the public of the fact that this dominant pharmaceutical product seemed to be very largely manufactured of short weight.

We say that we were not surprised, for we were advised that some manufacturing houses, whose wares had failed to come up to the standard, and whose advertising patronage was large and influential, had issued requests (perhaps we might rather say commands) that the investigations of THE NEWS Commission should be sneered at or suppressed, under threat of withdrawal of advertising. Our information came from sources which we could not discredit, and though we were unable to obtain copies of the letters in question, we could not disbelieve their existence, humiliating though the fact might be to professional journalism.

It seems that the able and independent *Pharmacist and Chemist*, published by the Chicago College of Pharmacy, was thus approached. So far from granting the request, *The Pharmacist* was led to repeat and carry out the investigations of THE NEWS Commission, with the result, as our readers know, of fully confirming them. *The Pharmacist* now follows this up, by giving in its August number the following interesting extracts from letters which it had received demanding the suppression and contradiction of the article in THE NEWS:

"The republishing of this article will do us great injury; therefore, being liberal advertisers with your journal, we have to ask that you will withhold its publication."

Another writes:

"This matter is of great importance to us, and an opportunity offers itself to you to render us and myself a favor which we will be most glad to reciprocate when occasion offers. Can you not then, taking the comments which we lay before you, come out and say something to restore the confidence of any of your readers which may have been disturbed by the absurd article in THE NEWS?"

And still another writes:

"We feel that the time has come when we must decide to withdraw our advertisements from all journals that take issue against our interests. The recent action of THE MEDICAL NEWS is a case in point, and we ask you if, in justice to ourselves, it is not right that we should expect that you will condemn the analysis as published by them?"

While thanking *The Pharmacist* for the manly and independent position which it has assumed in this matter, we leave to our readers to discuss the problem as to whether the primary allegiance due by a medical journal is to its subscribers or to its advertisers.

NEW TESTS FOR SUGAR—PICRIC ACID.

WHILE the methods now in use for the qualitative testing of albumen seem to be as satisfactory as one may desire, the same cannot be said of the tests for sugar in urine. What, with the reducing power over the oxide of copper which is possessed by uric acid, and to a less degree by other constituents of urine, and the action of creatinin and other substances in preventing glucose, even if present, from reducing the oxide of copper, it is evident that the copper tests which are at once the most delicate and convenient, are far from satisfactory.

In the face of these facts all reagents which are superior to existing ones are welcome. Unfortunately, not all tests which are claimed to be superior by their suggesters bear the test of trial by others. Careful examination has satisfied us that two or three of those recently brought forward may safely be recommended to the profession as at least likely to be useful as comparative tests where doubt exists.

One of these, recently suggested by Dr. George Johnson (*Lancet*, March 17, 1883), is *picric* acid, the sensitiveness of which as a test for albumen has not long ago been alluded to in these columns. Picric acid is reduced to deep-red picramic acid by glucose when boiled with potash. To apply the test, a drachm of urine, a half drachm of liquor potassæ, and ten minims of a saturated solution of picric acid, the whole being diluted to three drachms by distilled water, are heated to the boiling-point and kept boiling for sixty seconds. If sugar is present, the fluid acquires a beautiful deep-red color, the depth of color being proportionate to the amount of sugar present. We have found half the quantities suggested by Dr. Johnson more convenient to work with, at least for qualitative testing.

For quantitative testing a standard solution is made by boiling together, for sixty seconds, a mixture containing one drachm of a solution of grape sugar containing one grain to the ounce, half a drachm of liquor potassæ, and ten minims of a saturated solution of picric acid, the whole being increased to three drachms with distilled water. The resulting color corresponds to an amount of sugar equal to one-quarter of a grain to the ounce.

For the purposes of a permanent standard, this color is exactly imitated by dissolving acetate of iron with excess of acetic acid. The color thus produced will then also correspond to that produced by a solution containing one-quarter of a grain of sugar to the ounce, when treated as above.

The above-named proportions of the suspected urine, liquor potassæ, and saturated solution of picric acid, the whole diluted as before to three drachms, are then boiled for sixty seconds and the resulting fluid compared with a column of the standard solution in a test-tube of equal diameter. When the color of the boiled fluid is deeper than that of the standard, it is diluted until they agree in tint. With these data the quantity of sugar may be evidently calculated.

If the urine contains more than one grain to the ounce, the quantity of the picric acid solution must be increased ten minims per grain; and if the urine contains more than sixty grains to the ounce, it must first be diluted by distilled water to a definite proportion.

This test is said to be quite unaffected by albumen, but a turbidity occurring in the process of testing, due to phosphates, must be filtered out. Dr. Johnson found identical results in analyzing the same specimens by this method, and by Dr. Pavy's ammonio-cupric solution. We have tried it in qualitative testing and obtained distinctive reactions with urines containing but small quantities of sugar, but are not prepared to speak authoritatively of its relative delicacy. As to quantitative testing, we should infer that it would be only in the hands of experienced analysts that gradations of color should be relied upon in determining quantities.

In future issues we will describe other recently suggested tests for sugar.

COLD DRINKS IN HOT WEATHER.

VERY vague notions exist in the popular mind as to the use of cold drinks and ices when one is very warm and perspiring. There is a vague impression that they are harmful, but few know how or why. The fact is that the use of iced water as a drink, in moderate quantities at a time, even if often repeated, is not harmful, but advantageous to the over-heated and perspiring individual. By their use, the temperature of the blood and body is lowered, and the loss of water by perspiration is made up — two important safeguards against the effects of overheating.

But the ingestion of large amounts of iced water by the overheated may be harmful, and in more ways than one. In the first place, among the most frequent but less serious consequences of the use of such amounts of cold water is the result of its use at meals, when the deluging the stomach with cold water lowers its temperature below that at which digestion is best accomplished, and this important function stops or is retarded until the proper temperature is regained. Dyspepsias and diarrhœas and possibly cholera morbus may be the consequence. The same results may ensue from the use of ice-cream and water-ices, and these truths apply, of course, to all seasons; it is simply that the abuse is more apt to occur in hot weather. We have more than once seen little children who have had attacks of vomiting after concluding a full meal supplemented by the free use of ice-cream, and we recall one instance in which convulsions supervened.

Another more serious consequence of the ingestion of large amounts of ice-cold water, and one which can perhaps only occur with an empty stomach, is sudden death. This, although a rare event, is still sufficiently frequent to make a word of precaution necessary with regard to its cause. This happens, as already intimated, when large amounts of ice-cold water are drunk on an empty stomach by an overheated person. Its action is doubtless through the nervous system. The nervous supply of the stomach is, by the pneumogastric and branches of the sympathetic, derived from the splanchnics and solar plexus. The former is the motor nerve, whose operations are chiefly regulated by the central nervous system, and the latter may be termed the sensory nerves. The accident may be explained by supposing a sudden shock upon the terminal filaments of the sympathetic nerve carried to the solar plexus, and thence to the medulla oblongata; whence an inhibitory impulse is reflected along the vagi to the heart and stops its beating. The effect is analogous to that daily produced by the experimental physiologist by means of an induction shock applied at any part of the course of either vagus.

It is well known that when atropine is injected into the blood of animals experimented upon, the strongest induction shocks fail to produce this inhibition. Might not some practical use be made of this fact in cases of sudden heart-stoppage from this or other cause?

Another method of deleterious operation of the ingestion of large quantities of water, which applies of course to water at any temperature, has been suggested. It is that in the thickened state of the blood which succeeds the rapid transpiration of the water of the blood in hot weather, a condition favorable to the rapid absorption of large amounts of ingested fluid is produced. The effect of the addition of such a large amount of water to the blood is to promote a solution of the red-blood corpuscles—a hæmoglobinæmia—which, of course, if extensive, must be incompatible with life. But we have grave doubts of the operation of such a cause as this. However rapid the osmosis, it must cease as soon as a certain degree of dilution of the blood is reached.

A very reasonable question is, What quantities, then, of ice-cold drink may be taken with impunity by a person overheated and perspiring freely? We answer that it is not so much a matter of quantity as rapidity. If the cold water is introduced slowly, a few mouthfuls, or even a half tumblerful, at a time, followed by the same quantity in a couple of minutes, we do not think it likely that any serious results will follow. It is our impatience in this, as in many other things, which leads us into danger, and if the proper precautions are observed, the American custom of taking iced drinks may not only be a harmless, but actually a wholesome as well as an agreeable luxury.

PRELIMINARY TREATMENT vs. QUININE.

In no part of the world has the change of opinion, in regard to the antiphlogistic treatment, been so complete and radical as in India. In an interesting paper on the subject of the treatment of remittent fever as it occurs in India, Dr. Norman Chevers compares the old practice of large and repeated bleedings, and mercury given to ptyalism, with the modern method of quinine in full doses. It is hardly necessary to say that the latter is now the general practice in India as elsewhere.

There is, nevertheless, a practical question here in regard to the necessity of some preliminary treatment as a preparation for the administration of quinine. There is a belief, shared in by a good many excellent practitioners, that the curative effect of quinine is enhanced by such preparatory treatment. It is held that quinine is not properly absorbed when the tongue is heavily coated, the conjunctivæ yellow, the stomach in a catarrhal state, and the portal system congested, and that these conditions must be removed by the administration of mercurial purgatives. As these apparent complications are really the morbid complexus, and have the same significance as the fever, it would seem probable that the remedy effective against one set of symptoms ought to be equally so against the other. Experience confirms this, for if quinine be given suitably, with the disappearance of the fever the accompanying disturbances cease also.

It is important, however, to separate those symptoms due to the malarial infection from complications properly speaking. Complications determined by the systemic disturbance, and not a necessary part of the malarial disease, require appropriate treatment. The question in any case will be settled by the application of this rule. As an illustration of this we may take the condition of intense gastroenteric irritability, which, preventing the absorption of quinine, requires well-directed preliminary treatment.

TUBERCLE-BACILLI IN DISCHARGES FROM THE EAR.

The most recent seat of demonstration of the presence of the bacilli of tuberculosis appears to be the middle ear. Dr. Eschle in the *Deutsche med. Wochenschr.* for July 25th, reports two cases in which the discharge from suppurative disease of the middle ear contained bacilli. In one there was concurrent advanced tuberculosis of the lung. It is interesting to note that the discharge, for several days, presented the appearance of "blue pus," said to have been observed but twice by Politzer in his experience with discharges of the ear.

In the second case, that of a boy, although there had been scarlatina, nephritis, diphtheritis and suppurating lymphatic glands, physical exploration of the chest gave negative results, and the perforation of the tympanum subsequently closed. Myringitis and otitis externa continued, and bacilli continued to be found in the discharge.

The bearing of these observations on the possibility of the existence of tuberculosis of the middle ear—supposing a necessary relation of bacilli to tubercle—is evident.

REVIEWS.

A System of Human Anatomy, Including its Medical and Surgical Relations. By Harrison Allen, M.D. Section IV. Arteries, Veins, and Lymphatics. 4to. pp. iv. 335–438. Philadelphia: Henry C. Lea's Son & Co., 1883.

We can congratulate its accomplished author on the steady progress of this book—a genuine storehouse of anatomical knowledge and of its applications to medicine and surgery. No other work with which we are acquainted exactly fills its place. Its descriptions are none too long, and its remarks on the bearing of the anatomical facts on the numerous pathological conditions, whether frequent or rare, are of the utmost value to the practitioner. Many a case involved in more or less obscurity will be cleared up to him if he will refer to the observations on the variations, and the clinical relations of the structures involved. Especially is this true in the interesting notes on the zoölogical analogies to variations in human anatomy and on the development of the fœtus. In noticing the previous sections, we have so frankly and so forcibly expressed our opinion of the value of the book, that it would be but iteration to say it anew of each part.

But, as with the Seven Churches of Asia, we must say of every part "Nevertheless I have somewhat against thee"—errors to be corrected in the second edition, which we doubt not will soon be demanded.

The plates are greatly improved over the other sections. The color printing is admirably done, and the finish is better. Still many of the names appear indistinct, and there are faults, some of which are simply blemishes, but others are serious errors. Thus, in Pl. lxi. Pneumogastric, in Pl. lxx. Tendo Achillis, and in Pl. lxxiv. Hæmorrhoidal, are all misspelled, and in Pl. lxx. "Interossea Art." should be either "Interosseous Art." if English, or "Art. Interosseæ" if Latin.

But anatomical errors are more serious, and we were quite startled, in Pl. lxi. Fig. 2, to find a subject showing both common carotid arteries on the left side of the neck, and a branch from the right common carotid just above the clavicle, the distribution of which is left to the imagination, as it well may be. In Pl. lxx. the number of terminal slips, both of the extensor longus and extensor brevis digitorum, is inexact; and no one, we are sure, can trace the connection of the belly and the tendon of the extensor proprius pollicis. Plate lxxvi. Fig. 2, makes the internal carotid artery spring from the aorta, and shortens and displaces the internal jugular vein in a way that cannot be accounted for by the pose of the head and neck. The student will often be puzzled to recognize unlabelled structures, as in Pl. lxx. the slips of the extensor brevis. Fig. 84 gives us a very long, unlabelled superior intercostal vein, or azygos minor, as it is often termed, in distinction from the hemiazygos (though usage is not very uniform as to these names), while Pl. lxi. makes the hemiazygos empty very high up and into the cava, and not into the azygos major, as in Fig. 84; and in Pl. lxxi. the external jugular is not labelled, though the anterior is.

Of the text, we have little to say but praise. On p. 402, Dr. Kelley's recent paper on the double femoral artery should surely have been referred to, or the account in Henle's *Anatomy*, rather than Sir Charles Bell's single case, in 1826, and Mr. Houston's, in 1827. On p. 411, the interosseous arteries are termed digital; the definite, fixed order of relation of the posterior tibial artery and nerve and the accompanying tendons behind the inner malleolus (p. 408) is not clearly stated; and on p. 398 it is said that, when the obturator artery skirts Gimbernat's ligament, it "would in this position, of course, be wounded in operating for femoral hernia," instead of "it may be wounded."

But, *per contra*, no one unless he has made a book, especially one with many and intricate plates, can possibly know how hard it is not to make some errors. Happiest he who makes the fewest.

Abdominal Hernia. By Rushton Parker, B.S., F.R.C.S., etc. 8vo. pp. 56. Liverpool: Adam Holden, 1883.

Three ideas seem to dominate this production, viz., it is not good to feed patients with strangulated hernia; it is not the strangulation of omentum which proves serious in so-called omental hernia; it is wise to attempt a radical cure in operations of herniotomy, by ligating the peritoneal layer of the hernial covering close to the abdominal opening, after reduction of its contents.

If there be, in the way these ideas are presented, any merit which outweighs the disadvantages of the author's style, we have not discovered it.

The monograph is unsystematic, incomplete, tiresome to read, and unremunerative when read.

SOCIETY PROCEEDINGS.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Thursday Evening, June 28.

The President, James Tyson, M.D., in the Chair.

Dr. J. S. Musser presented

A SPECIMEN OF RENAL CALCULUS, OXALATE OF LIME,

with the following history:

R. K., æt. 32, a stone-cutter, residing one year in Philadelphia, applied to me for treatment June 5, bringing with him a sample of his urine. It was bloody, and had been voided without pain during the twenty-four hours prior to this visit. Three months ago, without any cause, he was seized with pain in the left loin. The pain increased in severity, kept him from work, caused faintness, but no nausea or vomiting; did not radiate in any direction, save transversely to a slight extent; lasted three days, and was not followed by hemorrhage. In the intervening three months he was in good health. A jar of the body or any movement did not increase the pain. It may be noted, but is rather irrelevant, that for ten or more years he has always had a weak back, becoming painful when stooping.

Twelve hours after the consultation this same localized pain recurred, and continued for twenty-four hours. Suddenly it was relieved, and the subsequent urinary discharges were clear. In three days, he had a return of the pain and hemorrhage simultaneously. The pain increased in severity, and at the height of the paroxysm extended to the testicles and the head of the penis. The paroxysm was relieved by the passage, of the calculus I show you, by the urethra. The passage of the stone through the ureter was characterized by the most agonizing pain and frequent attempts to urinate. Microscopical examination of the first sample of urine showed the red color to be due to blood. A similar examination of his clear urine, as well as the bloody, proved the presence of urate of soda and crystals of the phosphates. The urine was acid. The diagnosis of renal calculus was not difficult, but the microscopical appearance of the urine led me to infer that the stone was composed of uric acid. With such ideas, the patient was put on alkaline treatment. The sequelæ proved that the solvent effect of such treatment was of no avail, save from the diuretic action of the drugs. Morphia was given to relieve pain.

A portion only of the stone was received, an angular portion having been broken off by the patient. The portion weighs sixty-six grammes. The exterior is tuberculated; the interior dark, in color bluish; the exterior laminæ light-brown. It is exceedingly hard. Chemical examination was made by Dr. Leffman, who reported it to be an oxalate of lime calculus.

HÆMATOMA IN THE UPPER PORTION OF THE MEDIASTINUM PRODUCING DEATH BY SUFFOCATION.

DR. J. T. ESKRIDGE said that he obtained the specimen from a colored man, porter, aged thirty-two years. He had led an irregular life, but it was not positive that he had ever contracted syphilis. During the past winter he suffered from a severe cold on the chest, and was told by his physician that his heart was inflamed. With the exception of a slight cough, unattended by any difficulty in breathing, he had considered himself in excellent health. On June 10, 1883, after carrying a heavy trunk on his shoulder from the first to the fourth floor of a hotel, at Cape May, he was seized immediately with great difficulty in breathing, and was compelled to seek the open window to prevent suffocation. During the next two days, while still remaining at the sea-shore, he suffered from several attacks of shortness of breath, each lasting from several minutes to an hour or more.

He was admitted to the Hospital of the Jefferson Medical College on the evening of June 12, about sixty hours after the occurrence of the accident. On admission, his breathing was so labored that he was unable to speak. He was gasping for breath, and bathed in profuse cold perspiration. Respiration 36, with greatly prolonged expiration; pulse 100; temperature 99.7°. Inhalations of amyl nitrite, and the hypodermic use of morphia and brandy seemed to give relief. The attack lasted about twenty-five minutes. He slept well during the night, and was tolerably comfortable until 5 P.M. the next day, when he had another paroxysm, which was promptly checked by amyl nitrite, morphia, and dry cups to the chest.

June 14, A.M.—Dr. Eskridge saw him for the first time. The patient was breathing quietly, and said that he felt comfortable. Pulse and temperature were nearly normal; urine contained neither albumen nor sugar; no cardiac murmur was detected; lungs were hyperresonant at their apices. Loud, moist bronchial râles were present throughout both lungs. In view of the man's former freedom from attacks of dyspnœa, he thought that he detected nothing capable of giving rise to so great interference with respiration. The next two days no dyspnœic attacks occurred, and he seemed to be doing well.

17th.—His breathing was distressing for several hours. Nothing seemed to afford much relief.

18th.—Severe asthmatic breathing came on at 6 A.M., and lasted in its worst form about six hours. Chloral hydrate gave some relief. After that paroxysm his breathing did not again become quiet. He died, exhausted, at 7 P.M. the next day. With the exception of occasional headache, he did not complain of pain at any time.

Sectio cadaveris was made by Dr. Parrott, the medical resident, the pathologist of the hospital and Dr. Eskridge being absent from the city at the time.

Thorax—pericardial sac was completely obliterated by old, firm adhesions between the pericardium and heart. The heart was rather fat, and both ventricles were relaxed and contained considerable dark fluid blood. Valves nearly normal. Both pleuræ were adherent to the upper portion of the pericardium, and the left pleura was everywhere adherent to the lung. Both lungs were emphysematous at their apices, and considerable lobular emphysema existed. Bronchial tubes were congested and contained considerable mucus. A semi-solid, or rather soft oblong body, about two inches long, by one and a half wide, was found lying upon the lower anterior surface of the trachea, embedded in connective tissue, and firmly held by old adhesions. It occupied a position just above and behind the transverse portion of the arch of the thoracic aorta. Three of the rings of the trachea in the position where the greatest pressure was exerted by the semi-solid mass presented a dark color, and one of the spaces between the discolored tracheal rings was nearly ulcerated through from the effects of pressure. On cutting into the tumor, it was found to consist of blood, more or less clotted. The calibre of the trachea was greatly lessened at the seat of hemorrhage. No ruptured bloodvessels were found. No disease was observed in any of the arteries. Abdominal organs were nearly healthy in appearance.

DR. ESKRIDGE, in his remarks on the case, said that numerous cases of rupture of the aorta, or of smaller bloodvessels, into the trachea, bronchi, œsophagus, or mediastinum, were on record, but in all of them, so far as his knowledge went, death resulted directly from loss of blood. The peculiarity of the case, of which he had given a description, was the formation of a hæmatoma in the mediastinum. In hemorrhages into that space, the blood usually gravitated to the lower portion of the chest, and the patient soon died from loss of blood. In the case he presented, however, on account of extensive old and firm adhesions of pleural and pericardial connective tissue, and everything else in the upper portion of the mediastinum, a hemorrhage in that situation must necessarily have been circumscribed, and could have taken place only gradually by dissecting up the adhesions. He thought that the condition of the parts that prevented an extensive hemorrhage predisposed the smaller bloodvessels, especially the veins, of that locality to rupture. In view of the extensive alterations, by means of general adhesions, that had taken place at the seat of hemorrhage, it was not surprising that rupture of a bloodvessel should have occurred, when the parts in the anterior region of the neck and upper portion of the chest were suddenly put upon the stretch as occurred in the act of raising a heavy trunk from the floor and placing it upon the shoulder. From the specimen, as he obtained it, he was unable to say whether the hemorrhage had occurred from a rupture of the aorta or one of the smaller vessels, or from the bursting of a very small vessel that had become aneurismal. The tearing across of small veins would have been sufficient to give rise to the extravasated blood.

DR. NANCREDE presented a

CONGENITAL FATTY TUMOR BENEATH OCCIPITO-FRONTAL MUSCLE.

The tumor was simply presented on account of the rarity of such growths of *fœtal origin*. The patient was a child aged sixteen months. The growth was noticed at three weeks, and in consequence must have been of fœtal origin, as it then was of the size of a bean. It presented none of the symptoms of a fatty tumor, except a faint lobulation, the skin moving freely over it, and presenting none of the dimpling so common in lipomata. Its site was peculiar for a dermoid cyst, viz., over the right occipito-parietal region, yet its resemblance was so close, that by exclusion it was considered to be a congenital cyst. Upon removal it was seen to be distinctly beneath the aponeurosis of the occipito-frontal muscle. Microscopic sections kindly made with the freezing microtome by Dr. N. G. MacConard showed that the growth was a pure lipoma.

Dr. Nancrede also presented an

ADENOMATOUS GROWTH APPARENTLY RECURRENT: IN REALITY AN OUTLYING PORTION OF THE MAMMA NOT REMOVED AT A PREVIOUS OPERATION.

The above title really gives the essential points in the history of a patient, aged twenty-three years, upon whom two operations had been performed for a supposed fibroma (adeno-fibroma?) of the breast, which recurred after partial removal of the breast; the whole organ was supposed to have been then removed by another surgeon. Dr. Nancrede had opposed all operations at first, considering the breast was really not the seat of anything beyond a local induration after injury. He had subsequently removed the third growth, which, from its history and microscopic appearances, he was satisfied was the result of the irritating drag of the badly placed cicatrix on a small portion of breast tissue left at the second operation. The clinical lesson taught by this case was clear, viz., the freest possible removal of mammary growths.

Dr. Henry presented specimens from a

CASE OF ACUTE PHOSPHOROUS POISONING,

consisting of stomach, liver, kidneys, heart, and spleen. The phosphorus was taken with suicidal intent, during the night of May 7th, and was obtained by soaking the heads of a box of matches in water. Fifteen minutes after swallowing the solution, the patient, a male German, æt. 22, experienced a burning sensation in the stomach, which, in the course of a few hours (about six), steadily increased until the pain became excruciating. Copious and repeated attacks of vomiting then ensued, and followed every attempt to allay thirst, which was excessive. On the 8th there was a very loose discharge from the bowels.

The patient was admitted to the hospital on the tenth. His skin was sallow and dark, but not then icteric in hue. There was tenderness over the liver, and the line of liver-dulness was slightly increased. Severe pain in the abdomen was complained of, and this pain had continued with occasional intermissions since the 8th. The pulse was full and strong, 84 per minute. The temperature was 100°. The urine contained considerable albumen, but no casts, nor other abnormal ingredient. I extract the following from notes taken by the resident physician, Dr. James S. Carpenter.

May 11.—No pain. Pulse 100, temperature $98\frac{3}{5}^\circ$. Patient refuses food, but craves acid drinks.

12th—.Vomited once, but phosphorus not tasted by the patient as heretofore. Pulse 108, and weaker. Temperature, which was 101° on the evening of the 11th, now $98\frac{3}{5}^\circ$. Decided icterus. Thirst continues.

13th.—Jaundice increased; tongue dry and brown; red at edges; abdominal wall covered with numerous petechial spots. Pulse 126, temperature 100°.

14th.—Intense jaundice; one clay-colored stool; pulse very weak—132; temperature $98\frac{1}{2}^\circ$; extremities cold; bladder relieved by catheter; forty-eight ounces removed. The urine contained bile-pigment in large amount, and had a strong odor of phosphorus. The man died at 11.40 A. M., one week, less fourteen hours, after taking the poison. As the patient was not admitted until the third day after he had swallowed the phosphorus, the treatment was directed towards relieving pain, and retaining the strength as far as possible.

At the autopsy, which was made very soon after death, the stomach was found filled with a grumous, bloody fluid, but the gastric mucous membrane was quite pale and free from erosion or any sign of inflammation. The folds of mucous membrane upon its surface were, however, unusually prominent. The liver weighed three pounds fourteen ounces. The anterior border of right lobe and the parts adjacent to the gall-bladder were yellow-mottled. Streaks of this yellow coloration extended along the borders of the fissures on the under surface. In parts, these streaks were an inch in width. The bulk of the liver was normal in appearance; gall-bladder was empty; heart rigid in systole; its valves healthy; slight pericardial effusions.

Lungs—some old pleuritic adhesions and emphysematous vesicles at both apices.

Spleen and kidneys apparently healthy; blood fluid. A microscopical examination of the liver will be made and reported upon at a future meeting.

Dr. J. H. Musser presented for Dr. R. M. Givin the specimens from a case of

CARCINOMA (SCIRRHUS) OF THE BREAST,

with the following history: In November, 1882, Miss ——, a lady, of good circumstances, with a hereditary tendency to carcinoma and scrofulosis from the mother, noticed, at the upper portion of her breast, a small, extremely tender lump, the size of a hickory nut. The nodule increased in size, and on the day of removal—February 17, 1883—was as large as a duck's egg, in the first position mentioned. Neither at that time nor at any other time was the nipple either diseased or retracted, or the mamma discolored. The breast had never been injured; the lymphatics were not involved; the general health and nutrition were good.

The operation was performed on the above date by Dr. Givin on account of severe paroxysmal pain. So severe was this symptom that a slight opium habit developed. The wound healed nicely: there has been no return of the disease (May 20).

Examination of a section of the hard mass in the gland demonstrated it to be a scirrhus.

Dr. G. De Schweinitz presented a

TUMOR OF THE SCIATIC NERVE,

taken from an inmate of the University Hospital, who gives the following history:

On June 16, 1864, owing to a gunshot wound of the right thigh, he sustained an amputation of that member at the junction of the middle with its lower third. The flaps sloughed, and a few weeks later a reamputation became necessary. This stump healed, but was somewhat conical in shape, and was never comfortable from the very beginning, being subject to frequent attacks of severe neuralgic pain. Within a year from the date of the amputation, a small lump, tender to the touch, was noted, situated posteriorly and a little to the outer side of the stump. The pains now became more severe and more frequent, and were of a "jumping" character, to use the patient's own language. The tumor increased slowly in size, until three years ago, when its growth became more rapid, and at the same time the painful nature of the affection more pronounced, until lately the suffering was well-nigh unbearable. Finally the growth assumed the size which you see it now presents, and on the 12th of last month, Dr. Ashhurst removed it, since which time the patient has been free from all pain, except that which naturally accompanied the healing of his wound.

The growth is an irregularly shaped mass, about the size of a small hen's egg, having an external envelope of adipose tissue, loosely held together by connective tissue. On section, the interior is seen to be a somewhat elastic, rather dense-looking growth of whitish color, over which pass a few yellowish fibres, probably strands of the sciatic nerve. Microscopic examination of the true tumor mass shows an entire absence of any nervous elements, a section exhibiting fat cells, fibrous tissue, some spindle cells, and numerous free nuclei near the enlarged and dilated bloodvessels. The tumor would, of course, be classed clinically as a neuroma, following amputation, while in truth its pathological nature is that of a fibroma. It is interesting that a growth causing so much pain should be without any demonstrable nervous endowment; and surgically it is further worthy of note, because its removal was attended with immediate and probably permanent relief to the patient, a desired result which is by no means always obtained by the excision of these growths.

THE BACILLUS TUBERCULOSIS.

DR. LAURISON, by invitation, made some remarks upon the bacillus tuberculosis, and exhibited a number of specimens. He said that he did not employ nitric acid in preparing his specimens, as it seemed in many cases to bleach out all the bacilli from the tissues, but formic acid, in the proportion: Acid formic, one part; alcohol, two parts. It was a curious fact that the bacilli occurred in patches, while in other parts, apparently equally diseased, they were present in small numbers.

CORRESPONDENCE.

ACUTE TONSILLITIS, AND ITS TREATMENT BY BICARBONATE OF SODA.

To the Editor of THE MEDICAL NEWS.

SIR: In THE MEDICAL NEWS of August 11th I find a very interesting article on the treatment of tonsillitis, the writer recommending the compound guaiac gargle, and constitutional treatment if called for. About a year ago I saw a paper on this very subject in your JOURNAL, advocating the use of the bicarbonate of soda, which I have used ever since with remarkable success, so much so that in only one case, out of fourteen cases of acute tonsillitis which I treated in this manner, did suppuration occur. Of all the cases which I have thus treated, permit me to relate the following typical case, which will serve to show the value of the drug in this affection.

On the 20th of last November, a young man aged twenty-two, German, while working as a farm hand in a malarial region, came to me with the following history. Two days ago (on the 18th), he had had a slight chill, which was followed by a light fever; with this he experienced some pain upon swallowing. The constitutional and local disturbances grew constantly worse, till he decided to see me. Upon examination I found the tonsils and fauces so inflamed, and tonsils so enlarged, that deglutition was not only exceedingly painful, but almost impossible, as a large portion of the liquid food (the only kind of which he could partake) would, in the act of swallowing, regurgitate through the nostrils. He could not open his mouth over half an inch. Respiration was painful and more frequent than normal. Temperature 102°, pulse 108. Phonation was painful, and voice so changed as to render it difficult to understand him. Saliva accumulated constantly in large quantities in his mouth. I blew, by means of a glass tube, bicarbonate of soda on the inflamed tonsils and fauces, and ordered cold towels to be applied to the neck. Besides this, he took five grains of quinine every four hours. Next morning there was little or no fever, and the inflammation of tonsils was subsiding. I applied four times in three days the bicarbonate of soda in the manner described (which may, however, also be applied with a camel's-hair pencil), and the inflammation had entirely subsided on the fourth day. No suppuration occurred.

In my opinion, bicarbonate of soda is a valuable remedy in acute tonsillitis, but it should be applied thoroughly, and at least once or twice in twenty-four hours. If resorted to in time, it will almost invariably prevent suppuration.

Respectfully,
A. H. VINKE, M.D.

ST. CHARLES, MO., August 16, 1883.

MEDICINE IN CHINA.

To the Editor of THE MEDICAL NEWS.

SIR: It is desired to call attention to some medical facts which came to my knowledge during a recent visit to China.

I do not propose to treat of Chinese medicine, *per se*, but simply to state a few truths of the general practice of our art by our colleagues, American and English, now residents in that country.

I will confine my remarks more especially to the city of Tien Tsin, in Pi-chi-li, northern China.

As regards the practice of medicine among the Chinese themselves, there is none, according to our ideas.

It is true, they have many medicine-men throughout their vast possessions; but these must be classed under the head of charmers, charlatans, and quacks, *et al.* There is an absolute ignorance of all that pertains to anatomy, physiology, and chemistry, and such knowledge as necessarily belongs to the healing art. Thus, I repeat, there are no medical practitioners among the Chinese, as a people, worthy the name. They have no materia medica to which one can refer for a history, classification, and properties of their drugs; no pharmacopœia, so far as I am aware.

The vaunted qualities and excellences of many of their nostrums are set forth in local pamphlets, similar in kind to the advertisements of irregular doctors in other countries. But no official or national preparations of vegetable or mineral substances exist. In their drug shops they have a large number of dried plants, from which they prepare extemporaneously various teas, effusions, and lotions; also, powders and plasters. They do not appear to use tinctures of any kind; in fact, so far as the preparations in the stores go, no fluids are to be seen.

Of course, opium, camphor, rhubarb, gamboge, gentian, and catechu are found, and it seems that some of the virtues of each are understood and appreciated. From all indications, however, their whole plan of treating disease is empirical, and borders very much on the miraculous and the witchcraft order. Of surgery, their knowledge and practice are most primitive, as can readily be surmised after the statement, that they know nothing whatever about anatomy. This must continue to be the fact so long as the Chinese hold religious beliefs as now, for this all-important branch of medicine cannot be studied practically, as no dissections are allowed by their laws. It is hoped that some of the Chinese students in the United States will take up this study at the colleges where they are being educated, and that upon their return to China they may put the knowledge thus acquired into practice in a surgical sense. But, until the Chinese idea as to the great hereafter is materially changed, there will be no advance in the study of practical anatomy.

The existing fear and veneration of their dead make any attempt at examination of a cadaver quite out of the question at present.

It is this religious dread of disturbing the spirits which they declare remain near the bodies of their dead ancestors, that constitutes one of the great objections to the building of railroads in the Flowery Kingdom.

No Chinaman will permit, if he can prevent it, any tampering with the body of a relation or friend; or even with the grave of such, as would necessarily be the case in the construction of a highway, as he believes the eternal happiness of the defunct, as well as his own earthly existence, depends, in great measure, upon certain religious functions which he and his family observe, from time to time, near the sepulchre or body of the deceased.

In all the foreign settlements in China, as might naturally be expected, are resident physicians from the various quarters of the world; and in the more prominent towns are to be found men of fine abilities and considerable experience. To these the educated and well-to do Chinese in the immediate neighborhood frequently apply when urgently in need of medical assistance; but, in proportion to the immense masses of the people, these few are numerically as drops to the ocean. Owing to the physical hardships which almost every Chinaman experiences in early life, those who live to the age of puberty are like the Indians of this continent—about impregnable to ordinary ailments. In other words, only those endowed with strong constitutions and great vital powers are likely to survive childhood and youth. The feeble of body are exceedingly likely to perish in the early struggles for survivorship.

It is amusing, and not a little interesting to a foreigner, to witness a Chinese doctor examining a patient. The scientific gentleman takes very few minutes to make a diagnosis; for it is of some moment to him, that he recognize, so to speak, at a glance, where the disease exists with his patient; otherwise, his reputation might suffer.

The doctor looks at the invalid through his glasses—no Chinaman can be adjudged intelligent or learned, by his countrymen, unless he wears spectacles, and the larger they are the more important and respectable the practitioner is presumed to be—and at once demands where the trouble is, and immediately after the sufferer has indicated the seat of difficulty, the learned gentleman exclaims, "Oh, yes! I knew it was just there;" and he then examines both radial pulses, first the right and then the left, and confirms the diagnosis by stating that the pulse of the side affected beats so differently from that on the sound side. This settles the matter, in the opinion of patient and physician, and without further ado the treatment is advised and put into practice.

In the great majority of cases the foregoing is the entire routine of examination. Any additional rational or physical exploration is rarely observed. The Chinese practitioner resorts to measures to make known his fame and medicines, which bring vividly to mind the modes of procedure taken by certain itinerant doctors in this land of freedom. He selects a prominent part of the city or town for his office; puts out his conspicuous signs and promises in the most public positions; has one or more sedan-chairs—corresponding to our carriages—with gaudily-dressed carriers, and employs men to run about the principal streets to attract as much attention and cause as much commotion as possible. When not engaged in his office, he has his servants carry him at the top of their speed through the crowded thoroughfares, it being an important part of their functions to ask, or demand, that all passers get out of the way for the famous doctor Wing Lung, who cures all manner of diseases, is in great haste to see a dying man whose life he has promised to save. And it is a portion of their usual programme to have a body of retainers rush about the town, demanding if any one has seen the mighty doctor Wing Lung, as he is wanted at once—"here, there, everywhere?" One point in their practice is worthy of consideration; when they are actually called to see, or prescribe for a patient, and not on dress-parade business, it is an invariable rule to obtain the usual fee before acting. Pay in advance for all advice is a cardinal point which is not overlooked, no matter what the circumstances.

Counter-irritation is very popular with the profession and the laity; the actual cautery, rudely applied, is frequently put into service. Setons, blisters, and caustics are also favorite modes of "making impressions." Tiger-claws and teeth in powders, dried toads, lizards, snakes, and bugs are prominent in the armamentarium of the celestial physician. Urine from a youth is judged to be a tonic; and the excrement of various animals finds notable places in the materia medica of this people. It is to be remembered, that the Chinese woman lives an almost excluded existence. Upon no account can a man, not a relative, be permitted to see, much less to touch her, no matter how ill she may be. Domestic practice has to do for her case, and if there are exceptions to this law, they are so few as to be isolated and unknown in the great mass of cases. If there were no other reasons for the Chinaman's constant thanks to the power that made him a man, this well-known unrelaxing custom would seem to be sufficient cause for his gratitude. This brings me to speak of a lady physician, now resident in Tien Tsin, in the vice-royalty of Pi-chi-li; and certain circumstances connected with her labors among our celestial friends. It scarcely need be mentioned in this paper, that there are no Chinese female practitioners of medicine; not even "irregulars" of their own stamp. For reasons already given, the gentle sex has an exceedingly tough time of it when ill; indeed, this statement may describe her life in its entirety. Even in child-bed, the unfortunate woman, be she rich or poor, has no assistance as we are accustomed to afford a patient in that state. It is the fact, that she is surrounded by the women of the family, who, as a rule, let nature take her course; but should there be difficulties, such as an arm presentation for instance, summary measures are instituted; and if either mother or child escapes with life, the fact may be regarded—as indeed it is—marvellous and noteworthy. That such should be the case is not difficult to understand, when we are told that the usual mode of procedure in such an event is to push the protruding arm back into the uterus if possible; otherwise, it is cut off; and to aid in the delivery, the expectant mother is sat upon by one or more individuals, or she is pulled about the floor, or both successively. We have no knowledge as to how they manage post-partum, or, in fact, any hemorrhage. Statistics of any kind are not recorded for the benefit of foreigners, as regards the practice of medicine; save the reports given by the custom house physicians, and those voluntarily made by the missionary and other regular practitioners, we have no data concerning vital statistics in China. Whatever knowledge and experience a Chinese doctor may acquire, he keeps it to himself, so far as the outside world knows. As concerns the diseases and most else of Chinese women, we are utterly in the dark.

To return to our lady physician, Dr. Howard. This lady was educated at Ann Arbor, Michigan, and, eventually graduating in medicine, was sent to the East Indies as a medical missionary by one of the American societies. Her first field of duty was at Pekin, the great capital of the Tartar rulers of China. As it is a well-known fact, with all mission-work in that conservative land, Dr. Howard's labors were making very slow progress when an event occurred which has actually made a revolution in the field of medical possibilities in the last. It will be well to give, somewhat in detail, an account of the circumstances which have resulted in so much good to the people interested. We all know that Li Hung Chang is the viceroy of Pi-Chi-li, one of the great political divisions of the Chinese Empire, and is the absolute master of over 20,000,000 of beings.

He resides in the imperial city of Tien Tsin, the port of Pekin, situated on the Psiho river, some sixty miles from the sea, and about eighty distant from the capital. Now, Li Hung Chang, in addition to being governor of the said province, is one of the senior generals of the empire; in point of fact, he is the most distinguished military mandarin in the country, and commands by far the most formidable body of troops in the army. Moreover, Li is in reality the head of foreign affairs of China, and wields a mighty influence in the government, both as regards her domestic and outside policy.

This viceroy is a progressive man, and encourages the advancement of foreign ideas and measures among his countrymen, as far as is consistent with their great conservativeness. He is necessarily obliged to go very slowly in a land where 350,000,000 of people look with a jealous eye on any change in a programme which has predominated with them all from time immemorial. Well, the principal wife of Li Hung Chang was ill, and her family became much alarmed about her. At this time—1880—it so happened that the viceroy had a friend in high esteem, Mr. Pettie, a former vice-consul of the United States at the port of Tien Tsin, for whom he sent to ask advice in the hour of distress. This gentleman appeared promptly, and had the circumstances explained to him: he lost no time in urging the governor to call in a foreign doctor. A more radical idea could scarcely have been proposed to any Chinaman; and it is quite within the bounds of possibility to say that, had any of the king's subjects made such a proposition, he would have been decapitated at once for his temerity. The American argued that if the facts were as stated by the attendants of Lady Li, she would soon perish unless intelligent and professional assistance came to her relief at an early moment.

The viceroy is a markedly learned man, and it required no great amount of explanation to make clear to his mind that prompt action was demanded in the premises, and he sent for Dr. Mackenzie, an English physician, attached to the London Mission, living in the foreign settlement near Tien Tsin. The doctor lost no time in obeying the imperial mandate, and, once in the Yamen, Mr. Pettie soon put him in possession of the main facts of the case.

As Dr. Mackenzie speaks the Chinese language markedly well for a European, he was not long in making out what the trouble was—viz., prolapsus of the uterus. It must here be noted that the physician was not permitted to see the illustrious sufferer. Such an idea—a man, a stranger, and a foreigner to go into a lady's room—was not to be considered for an instant, not even by so radical a Chinaman as Li Hung Chang. Thus the doctor remained in an out-room, and explained, as best he could, to the invalid's women-folks, the means to be taken to replace the organ in its proper position. But partly through fright, partly through want of knowledge and skill, and the usual difficulties attending such an operation, it was found impracticable to restore the parts to their normal condition, a fact not very marvellous, all the facts considered, to any one familiar with the subject.

In this dilemma, Dr. Mackenzie bethought him of Dr. Howard, the lady whom we mentioned a moment since, who was not only a friend of the doctor, but a colleague, then living in Pekin. He explained the situation to the viceroy, and asked if there would be any objections to this lady's assistance being invited. Li Hung Chung consulted with his advisers and Lady Li, and it was shortly determined that the lady physician should be summoned.

Dr. Howard came down those eighty miles in a springless, two-wheeled cart over one of the roughest roads on this or any other world; and getting at once a synopsis of the case from Dr. Mackenzie, she went to the patient, and quickly succeeded in returning the displaced organ, thus making the lady comfortable, and putting her friends mentally at ease. Lady Li was not long in recognizing the service done her by Drs. Mackenzie and Howard, and a warm friendship sprang up between the latter and her royal patient from their daily intimacy, for Dr. Howard remained in Tien Tsin to take care of Lady Li. Handsome and valuable presents were the least of the benefits coming from this incident. Li Hung Chang also appreciated the labors of the Caucasian physicians, and, what is more, the intelligence and system of which they were the exponents. He became interested in foreign medicine, and being, as already stated, a go-ahead man in every sense, began to encourage the work of Dr. Mackenzie, who was laboring assiduously among the invalid poor of the city, in connection with his mission. Dr. Mackenzie became the medical adviser of the viceroy, whose influence quickly had its effect upon the members of the court and other prominent people. This good physician was allowed to hold a clinic at one of the large temples in Tien Tsin, to which flocked, by hundreds, the lame, the halt, and the blind males of the neighborhood. It is to be stated that the doctor had a small dispensary on the outskirts of the foreign settlement, where he treated, gratuitously, such invalids as came for assistance, the London Mission supplying medicines, appliances, and instruments to a certain extent. In this contracted place, he saw and prescribed for hundreds of sufferers during each month; did such surgery as was consistent with out-door practice, and even, at times, performed major operations in extreme cases, feeding and providing for the invalids at his own expense. Having installed himself in the temple, as mentioned, and being thus under the immediate protection of the viceroy, patients came in crowds to receive aid and advice. Li Hung Chang did not do things by halves; he granted a sum of money with which to purchase medicines, and agreed to pay for any and all instruments that the doctor might need in this practice. And this was not all; for seeing and recognizing the wonderful interest that the viceroy evinced in foreign medicines, his followers and subordinates set about raising money to build a hospital for Dr. Mackenzie. A sum sufficiently large was soon accumulated to pay for such an institution as proposed, and in a short time it was commenced. This hospital was built by Chinese carpenters, and, to allay as many prejudices as possible, the native ideas of architecture were followed, save in minor particulars. It was finished in November, 1880, and, on December 2d, formally opened by the viceroy in person, assisted by various Chinese officials of high rank, in the presence of all the foreign consuls, distinguished citizens, and representatives of the several ships of war then in port. His excellency Chung Tso Ju, the present Envoy Extraordinary and Minister Plenipotentiary from the Court of Pekin to the United States, Spain, and Peru, who was at the date mentioned latai of Tien Tsin, and one of the prominent lieutenants of Li Hung Chang, took an active part in supporting this foreign institution by his great influence and wealth. The hospital contains about forty beds, having the necessary dispensary, waiting, operating, and lecture-rooms.

Without going into the details of its peculiar arrangements, it may be admissible to state that the character of these beds is one of the most curious of its features. They are constructed of large bricks set in mortar, having a fireplace beneath each, in which straw, hay, and brush, are burned for heating the whole. Thus, each patient has his own fire by which all his food is cooked in utensils furnished by himself. Now, when a Chinaman takes to one of these beds, which might, with propriety, be termed a brick-oven, he immediately proceeds to divest himself of all clothing down to the skin; nothing remaining on the body save, it may be, a piece of cloth about the loins. He then places himself between two thick, coarse, plank-like quilts, with his neck upon a wooden pillow. This is the Chinese fashion of preparing for and going to bed, and although it has drawbacks, yet it allows, certainly, of free inspection of the individual at a moment's notice. And let it be remembered, that for nearly half the year the climate of Tien Tsin is arctic in severity, there being no artificial heat in the building save that derived from the burning brush or straw in the small fireplaces beneath the so-called beds, which does little to raise the general temperature of the wards. It is not uncommon for operations of magnitude to be performed in an almost freezing temperature, the patient being nearly nude, which fact illustrates, in a measure, the great vital powers of this hardy people.

At the dispensary in the temple, some two hundred or two hundred and fifty out-patients were seen and attended four times weekly, a record being kept of each by Dr. Mackenzie, assisted by several Chinese students, who were at that time studying the rudiments of physic under the doctor's tuition. It is frequently the case, that one or more of the medical officers of foreign war-vessels in port avail themselves of the gentleman's courteous invitation, and assist him in these trying and extensive labors. There is rarely any difficulty or delay in obtaining aid when operations are to be performed. Minor surgery is done on the moment at the temple; but such cases as require hospital treatment are sent to that institution, provided the candidate for operation can bring his bedding, fuel, and is able to buy his food.

Unfortunately, there are as yet no funds for these purposes. However, it is thought these necessaries will be supplied in the near future. Diseases of the eye and ophthalmic surgery are, by all odds, the most frequent. Dysentery, hemorrhoids, ring-worm, and syphilitic affections are very common. Few acute cases are seen, as invalids, so far as regards the immense majority, only seek foreign assistance when they have failed to find relief through their native doctors. But once they place themselves in the hands of the surgeon, any doubts or hesitation they may have had quickly vanish, and their trust in the skill and ability of the operator is implicit—they coöperating with him fully and to their uttermost. Anæsthetics are not administered, save in major operations.

The Chinese bear surgical interference markedly well. Owing to the total disregard of all hygienic and sanitary precautions and rules, it is rather marvellous that so many receive benefit from treatment; for it is difficult to imagine any people who have fewer comforts of life than do the great masses of the Chinese. Indeed, agreeably to our ideas of the necessaries of life, they have none whatever.

To return to Dr. Howard. Through the influence of Lady Li, the doctor has a part of the temple already alluded to set apart for her clinics, where aid and advice are given to the indigent women sufferers. Of course, no man is permitted to take part in these labors; although Dr. Mackenzie is occasionally called by Dr. Howard to consult as to certain special cases. A gentleman of New York has sent a considerable sum of money to Dr. Howard, to aid in building a hospital for native women; and Lady Li is coöperating in this good work. But the women of the Celestial Empire are kept so much excluded from public view and association, that time must elapse before any great advance is made in permitting the public gathering, even for health considerations, of the female element, save among the most abject and poverty-stricken of the people, who have no position or reputation to guard or lose. It remains to be said that, so far as I am aware, the Chinese have no eleemosynary institutions of any description. The indigent sick receive no care or aid, save it may be from passers. As long as able they wander about, or lie in public places in hope of obtaining, now and again, some assistance from the charitably disposed. The insane are either cared for by their families or run in the streets; those too violent to be left thus at liberty, are put in chains and treated as, and with, malefactors. There are to be seen in the great city of Tien Tsin, hosts of the sick, the poor, the demented and crippled, each winter with Fahrenheit's glass standing below zero, without clothing, save, at times, a fragment of an old carpet, bag, or like covering. Shelter they have none, if we except an upturned cart, or the lee of some building or fence; and apparently they have been long without food—thus being at once among the most abject and miserable of beings. In all the important foreign settlements are to be found, however, dispensaries, and in some hospitals, into which are received many of these unfortunate people; and the various missions aid and supply the wants of the sick where it is practicable to do so. VIATOR.

NEWS ITEMS.

CHICAGO.

(From our Special Correspondent.)

Fatty Crystals.—In a former number allusion was made to the medical expert testimony in the lard investigation before the Chicago Board of Trade. Under the microscopical evidence for the defence, it was stated that Dr. W. T. Belfield was the discoverer of the crystals characteristic of lard and tallow. Facts, entirely new to us, having very recently come to light, the following statement with reference to the first recognition of these crystals is rendered necessary in justice to the real discoverers and to Dr. W. T. Belfield:

In July, 1881, Dr. B. P. Rose was retained by Messrs. Fowler Bros., to investigate the subject of lard and its adulterations from a chemical standpoint. In January, 1882, Dr. I. N. Danforth was requested by Prof. N. Gray Bartlett, of the College of Pharmacy, to make a microscopical examination of the same subject. The attention of both gentlemen was directed to finding crystals characteristic of pure hog fat and its adulterations. Dr. Rose removed the olein from the specimens examined, by means of absolute alcohol or ether, dissolved the residuum in turpentine or other members of the balsamic series, and, from the slow evaporation of such menstrua, recovered the rhomboidal plates with bevelled edges, the crystals now regarded as characteristic of hog stearin.

Dr. Danforth, after the removal of the olein, employed ether as a solvent of the residual stearin, obtained the lard crystals previously recognized by Dr. Rose, and, in addition, made the important discovery of the acicular, rosette crystals now believed to be characteristic of beef stearin.

The observations and experiments of Drs. Rose and Danforth were confirmed by Dr. P. S. Hayes and Dr. S. J. Holmes in January, 1882.

It is plain from this survey of the facts in the case that the credit of the discovery of the rhomboidal plates, with bevelled edges, characteristic of hog stearin, belongs to Dr. Rose; while Dr. Danforth must be credited with the first recognition of the acicular, rosette crystals characteristic of beef stearin.

Dr. W. T. Belfield applied the processes of Drs. Rose and Danforth and took the excellent micro-photographs of the crystals, which were presented for inspection to the members of the Board of Trade. The statements, published by various misinformed individuals, that cuts of lard and tallow crystals, as such, occur in the works of Husson and Gamgee, are entirely erroneous.

LIGATION OF THE OVARIES.—Dr. E. C. Dudley, Professor of Gynecology in the Chicago Medical College, has been engaged, for some time past, in experimental inquiry as to the effect of ligation of both ovaries in the lower animals. Up to the present time he has experimented solely upon dogs. The abdominal cavity is opened by an incision in the median line and both ovaries are secured by ligatures passed around their peritoneal attachments, without inclusion of the Fallopian tubes. No untoward symptoms have been observed after the operation. As was to have been expected in dogs, no peritonitis has ever resulted, and the abdominal incision has always healed by first intention. At the termination of various intervals the dogs are killed, and the ovaries examined. In every case the ovaries have been found to be greatly atrophied. After ligation, the ovary is in very much the condition of the pedicle of an ovarian tumor. It does not slough, but a collateral circulation is promptly established, which prevents gangrene. The nervous connections of the organ are completely interrupted. The constitutional effect of this interruption of the channels of nervous communication has not been observed fully as yet, but will constitute a future study. It is possible that a "collateral" nervous connection may be ultimately established. The effect upon menstruation has not been determined, but will receive due attention in the progress of the research. The objective point of these experiments is very evidently an important modification of Battey's operation.

FREUND'S OPERATION.—Dr. Roswell Park performed Freund's operation of total extirpation of the uterus upon a woman, suffering from scirrhous carcinoma of the collum uteri, ten days ago. A small parovarian cyst was found upon the right side, and was also removed. The woman died seventy-two hours after the operation, probably of pyæmia. Bichloride of methylene was employed as the anæsthetic. The autopsy revealed a slight peritonitis, but no hemorrhage.

BERLIN.

(From our Special Correspondent.)

THE TUBERCULOSIS QUESTION AND THE ARMY.—Last year the medical department of the Ministry for War issued a circular urging upon the medical officers with the army to give the utmost attention to beginning tuberculosis among recruits, and, as far as possible, not to enroll suspected individuals at all, or, if enrolled, to dismiss them from the service in the earliest stages of the disease. Hospital patients suffering from unquestionable tuberculous affections are to be isolated, and their sputa are to be disinfected.

It is firmly hoped that the death-rate from tuberculosis, already diminished to 3.8 per thousand (see official report for 1879–80) by the sanitary improvement of barracks and hospitals, may thus be reduced to its lowest possible degree. In relation to this question, the microscopic examination of the sputa lately has become of the greatest importance; therefore, first-rate microscopes recently were distributed among all the larger garrison hospitals, in order to facilitate an early diagnosis.

Prof. Fræntzel (who is also an active army surgeon), in a paper read before the Berlin Military Medical Society, highly congratulated the medical authorities of the War Department upon this step, which he thinks will be of great benefit to the army. He said he was proud to claim the priority among German clinical teachers in having unhesitatingly adopted the germ theory of tuberculosis, and scrupulously applied its logical deductions to clinical practice. Continued researches, now comprising upwards of five hundred cases, served to confirm his former views and statements about the diagnostic and prognostic value of the tubercle-bacilli found in the sputum (see *Berliner klin. Wochenschrift*, 1882, No. 45, and *Deutsche med. Wochenschrift*, 1883, No. 17).

As for treatment, a series of careful experiments, made under the regular control of Koch and Goffky, have taught him the inefficacy of all inhalation methods. It seems as if the medicaments employed in this way do not reach the diseased parts of the lungs, since even those which proved to be the strongest poisons against pure cultures did not in the least diminish the number of the tubercle-bacilli in the sputum. On the other hand, he rejects as useless and rather cruel the direct application of strong antibacteric solutions (bichloride of mercury!) to the lung-tissue, as recently performed by means of a Pravatz syringe in some clinical wards. So we find ourselves restricted to internal medication, and must try to overcome the enemy in that way. Till now, Fræntzel ascribes the best results to the creasote treatment, after the formula of Bouthard and Gimbert, which he adopted a couple of years before the germ theory (see *Charité-Annalen*, iv., 1879, p. 278).

LESSER'S ATLAS OF FORENSIC MEDICINE.—Forensic medicine in some way may be called the mother of pathological anatomy; but there is no doubt that during the rapid progress of the latter in the middle of this century the mother proved somewhat jealous of her own child. To-day this jealousy has subsided, and forensic anatomy, much to its own great benefit, has undergone a process of regeneration on the broad basis of pathological knowledge. This knowledge, of course, should be gained by earnest practical work in the dissection-room; nevertheless, the State physician, even if he be the best pathologist, will often find himself at a loss in face of those rare occurrences which are peculiar to forensic practice. This gap can solely be filled up by pictorial works representing the characteristic changes caused by those properly forensic emergencies, as poisoning, hanging, drowning, etc.

A modern standard work of this kind till now was wanting, at least, in Germany, the older ones, especially that of Casper, exhibiting only a few specimens from an obsolete point of view, and with very poor technical means. In a lucky appreciation of this want, six years ago, Dr. Adolf Lesser, then a young assistant to the Institute of State Medicine, in Berlin, after having well trained himself in pathological anatomy under the very eyes of Virchow, undertook to describe and have painted every characteristic specimen which happened to be observed in the ample forensic practice of the metropolis. For this purpose, he allied himself with a well-gifted artist, a pupil of A. v. Werner, whose school mainly excels in coloring. Color, indeed, is of the highest diagnostic value in forensic practice; sometimes color alone will tell us if a change is due to inflammation or to putrefaction; color will teach us, earlier than chemical inquiry, if the blood be changed by some gaseous poison; color will guide us in the differential diagnosis between a chronic and an acute abscess or hemorrhagic focus in the brain.

The fruit of these combined efforts of art and science is now lying before us. Lesser's *Atlas der gericht-*

lichen Medicin (Berlin, A. Hirschwald) may indeed be called a standard work, which fairly rivals the great atlases of Bright and Cruveilhier, and possesses the advantage that the highly finished technique in color-printing has succeeded in multiplying the plates in a quite unprecedented perfection. Perhaps the best recommendation is given by the preface, written by Virchow himself, who "can say, without exaggeration, that better colored plates hardly exist in pathological literature."

The first and second fasciculi, now ready, contain six plates each, with thirty-two figures, representing the macroscopic and partly the microscopic changes caused in the œsophagus and stomach by a long series of different poisons, as carbolic acid, nitric, sulphuric, oxalic acid, hydrate of sodium, bichlorate of mercury, camphor, phosphorus, prussic acid. Plates XI. and XII. exhibit some rare idiopathic changes, which might erroneously be taken for cases of poisoning. The text gives the exact pathological and forensic history of each case. The whole work will contain thirty-five folio plates, and will constitute an extremely valuable addition to our literature.

THE CHOLERA IN EGYPT.—The general cholera mortality rate has diminished during the past week. The disease appears to be dying out at Cairo, but remains about stationary in Alexandria. The mortality for all Egypt has markedly fallen.

The official returns of cholera deaths are as follows:

	Cairo.	Alexandria.	Total for Egypt.
August 14, . .	9	40	376
" 15, . .	5	. .	467
" 16, . .	6	44	433
" 17. . .	. .	41	. . .
" 18, . .	5	50	310
" 19, . .	4	32	182
" 20, . .	3	43	193

On August 14th fifty-five deaths were reported at Damanhoor.

The total number of deaths from cholera among the British troops in Egypt since the outbreak of the disease to date is 140.

On the 16th the Khedive again visited the cholera hospitals at Alexandria and spoke words of encouragement to the patients.

M. PASTEUR'S MISSION.—The French cholera mission, under M. Pasteur, arrived at Alexandria on the 16th.

CHOLERA IN INDIA.—Two hundred and twenty deaths from cholera in Bombay were reported on the 17th as having occurred during the preceding fortnight.

CHOLERA IN SYRIA.—On August 19th another death from cholera was reported at Beyrout.

CHOLERA PRECAUTIONS IN VIENNA.—The Vienna Board of Health has instituted a thorough system for the immediate cleaning and ventilation of overcrowded houses, flushing of the sewers, analysis of drinking water, and purification of the city atmosphere. The City Physician of Vienna has also commenced the personal inspection and ventilation of lodging houses, and given orders for the sorting and disposal of animal refuse, skins, bones, feathers, rags, etc., in the neighborhood of dwelling rooms.

YELLOW FEVER AT PENSACOLA.—Yellow fever has broken out at the U. S. Navy Yard at Pensacola. Surgeon A. M. Owen, U. S. N., in charge of the Medical Department of the Naval Station, Pensacola, under date of August 16th, advised Surgeon-General Wales, U.S.N., as follows:

"I have to report the appearance of yellow fever among the marine guard of this station. I have two well-marked cases now in the Naval Hospital, and other cases of fever of a suspicious character. And I beg to put on record, that I believe there are, from general rumors, sufferers with the said disease among the residents of the reserve."

The Secretary of the Navy also received a telegram from Commander Welch, commanding the Navy Yard, Pensacola, as follows: "Surgeon Owen reports a case of yellow fever in the Marine Guard; man is in hospital this evening; moved the quarter to second story of building. Relieved guard, numbering thirty-eight men, from all duty in order to isolate them from other persons. Surgeon Owen recommends transfer of guard North as soon as possible. The case was decided last evening. Two other men sent to hospital to-day. Cases not decided."

Instructions were telegraphed to Commander Welch to transfer the Marine Guard to Cape Anson, six miles from the Navy Yard, and to make all the sanitary arrangements necessary for the health of the yard. Orders were also issued to Surgeon Martin, at New Orleans, to proceed to Pensacola and render all assistance in his power.

On August 17th, Surgeon Martin arrived and took general charge of the hospital, and Dr. Harges at the yard. The Department was informed of Surgeon Owen's illness with the fever, and of the death of the first case reported, and that the Naval Station had been quarantined by Pensacola since noon of the 16th.

It appears that on the 16th Surgeon-General Hamilton received a telegram from the President of the Board of Health of Pensacola, requesting aid to establish a cordon around the Navy Yard. The Collector of Customs at Pensacola, was immediately directed by the Acting Secretary of the Treasury to employ ten patrolmen to aid the Board of Health in maintaining quarantine. The Collector on the night of the 17th, reported that forty men would be required for the service, as the patrol line was five miles in length. Surgeon-General Hamilton, with the approval of Acting Secretary French, on the following day telegraphed to the Collector of the Port, that on the filing of an affidavit by the Mayor of the city and the President of the Board of Health, that they are unable to employ a sufficient quarantine force, to employ as many patrolmen as necessary. The affidavits were duly filed, and the patrol was placed on duty on the evening of the 18th.

On August 19th, the Department was notified of the existence at the Navy Yard of six cases, including Dr. Owen's child, and of one death from the disease on the 17th.

On the 20th, Surgeon-General Hamilton of the Marine-Hospital Service was informed by telegraph by Surgeon White, at Pensacola, that no new cases had developed at the Navy Yard during the preceding forty-eight hours; that up to date there had been eight cases and three deaths, and that the fever was confined to the yard and hospital.

Surgeon Owen is reported to be in a critical condition.

YELLOW FEVER IN HAVANA.—There were forty deaths at Havana from yellow fever, for the week ending August 18th.

INVESTIGATION OF YELLOW FEVER.—The Brazilian government has appointed DR. DOMINGO FREIRE to investigate the causes of yellow fever, and study the following points. 1. Microscopic observations, and cultivation of the microbes already found. 2. Attenuation of the virulence of these microbes, and experimental inoculation of animals, with a view to, if practicable, human inoculation. 3. Action of salicylate of soda in the treatment, both hypodermatically and by mouth. 4. Autopsies for the purpose of determining the true pathological lesions of the disease. All the necessary instruments and apparatus will be furnished him, with three assistants.

Smallpox in New Orleans.—There were sixteen deaths in New Orleans from smallpox for the week ending August 11.

Pleuro-pneumonia in Connecticut.—The following is a copy of the report received at the Treasury Department concerning the outbreak of pleuro-pneumonia in Connecticut:

United States Treasury Cattle Commission,
West Newton, Mass., August 16, 1883.

Hon. H. F. French,
Assistant Secretary of Treasury, Washington, D. C.

Sir: I have to report an outbreak of lung plague in the town of Salem, State of Connecticut. On the 16th of April last a cow was purchased by H. E. Williams, of Salem, in Jersey City, near Hoboken ferry, of a man named Durham. Early in July a disease appeared among the cattle owned by Mr. Williams, three of which died or were killed by the owner. The lungs were examined by Prof. Leantarel, American Veterinary College, and by Dr. Rice, V.S., of Hartford, Conn., who pronounced the disease to be lung plague. By request of the State Cattle Commissioners, I visited the farm of Mr. Williams on Tuesday, the 14th inst. Of the remaining animals of the herd, three are affected with lung disease in the chronic form, the form has not fully passed through the acute stage of the disease. An adjacent farm is owned by Captain Leaman, who has a large herd of cattle, one of which has died. Both herds are in quarantine, by order of the State Commissioners, who appreciate the importance of preventing the spread of the disease, and, having full authority, will doubtless prevent its further extension.

Very respectfully,

E. F. Thayer.

The Treasury Department feels no apprehension as to the spread of the disease beyond its present locality. Whether the cow brought from Jersey City came from a herd recently imported is not known at the Treasury Department. Salem county is in the southern part of the State, about twenty miles from Long Island Sound.

The Need of the Library of the Surgeon-General's Office.—At the meeting of the American Library Association held at Buffalo, N. Y., August 14th to 17th, the condition and needs of the Washington libraries were considered, and resolutions were unanimously adopted to the effect that it is the opinion of the Association that a suitable building for the accommodation of the National Library, and also a separate fireproof building for the Medical Library and Museum of the Surgeon-General's Office should be built as soon as possible, and that the Executive Committee shall prepare a memorial to Congress, setting forth the necessity for these buildings, and offering in behalf of the Association any information on the subject which may be desired, and which they are able to furnish.

Index Catalogue of the Library of the Surgeon-General's Office.—We learn that the fourth volume of the *Index Catalogue* is now in the hands of the binder, and will be ready for distribution by the end of the month. It carries the work to *Fiz*. The appropriation for this work will be exhausted with the fifth volume, and, unless Congress makes an appropriation for completing it, the publication will cease.

Tri-State Medical Association.—The ninth annual meeting of the Tri-State Medical Association, will be held in Indianapolis, on September 18th, 19th, and 20th, 1883.

Virginia State Medical Society.—The fourteenth annual meeting of the Virginia State Medical Society, will be held at the Rockbridge Alum Springs, on September 4th, 5th, and 6th, 1883. The Address will be delivered by J. Edgar Chancellor, M.D., of Charlottesville, Va. The President, Wm. D. Cooper, M.D., of Morrisville, will deliver his Address on Wednesday, September 6th. A number of interesting papers will be read. A large attendance is expected, owing in great part to the liberality of the proprietor of the Rockbridge Alum Springs, who makes no charges to Fellows and Delegates.

Dr. Flint at the Dinner of the British Medical Association.—Dr. Austin Flint, in proposing the toast of the "British Medical Association," said he desired to express his thanks for the honor of the invitation to attend the fifty-first meeting of the Association, and to participate in some small degree in the sectional work. He could not adequately express the satisfaction he had derived from his attendance. Having reached a period of life when happiness was derived from retrospection rather than from anticipation, so far as the present life was concerned, he desired to say that the social and professional events of that meeting would ever hold a prominent place in his memory. His official connection with the American Medical Association rendered it proper for him to state that, for the most part, American institutions—political, literary, educational, and philanthropic—were based on their knowledge of the institutions of Great Britain, which the Americans rejoiced in calling their "mother country." The American Medical Association was modelled closely upon the British Medical Association; and, in view of a relation which he might venture to call maternal, he was sure they would be gratified to know that the transatlantic daughter was zealously and dutifully striving to follow, at a respectful distance, in the footsteps of an honored mother. As an evidence of the alacrity with which the institutions of the old were introduced in the new world, he might mention that the British Medical Association in age exceeded that of the American Medical Association by only fifteen years. It had always appeared to him that it must be a pleasing reflection to Englishmen that the English language was, as no doubt it would be for all time, the language of the vast continent of North America. English literature was American, and the proceedings of the British Medical Association commanded hardly less interest in the new than in the old world. He would even venture to state that there was not a hamlet, within the limits of the United States, so distant or so obscure, that the report of the proceedings of the British Medical Association would not be speedily conveyed to it by the *British Medical Journal* and the medical press generally.

Mr. Ernest Hart, in proposing the "Guests," said that they cordially welcomed among them the physicians of America, France, Germany, and their guests from Holland and other countries. Americans they regarded not only as brothers in the profession, but as kinsmen in blood who shared with them the common heritage of history, literature, and science. They were honored by the presence of the President of the American Medical Association, who was so much one of them that they had not put down his name to answer for the toast, but they had assigned that duty to Prof. Tilanus, of Amsterdam, who bore a name which was honored throughout his country, and had been honored for generations.

How they deal with Quacks in Illinois.—A travelling "Indian Medicine Man," Lightfall, by name, but known as "Kansas Jim," recently started business in Decatur, Illinois, and by the aid of a concert troupe, an Indian outfit and other claptrap devices, he, for a short time, did a thriving business pulling teeth and selling "cure-all remedies," the secret of whose preparation he claimed to have obtained from the Indians. Among his attendants was a certain Dr. W. O. Davis, of Peoria, to whom the State Board of Health granted a certificate last April, on the strength of a medical diploma, and under cover of which certificate Lightfall was trying to shield himself from the law.

After fleecing the credulous for a time unmolested, the citizens of Decatur concluded to put a stop to his swindling, and accordingly complained to the State Board concerning Davis, and at the same time caused the arrest of "Kansas Jim" for violating the Medical Practice Act. The State Board promptly revoked Davis' certificate, but "Kansas Jim" had his case taken before a Justice of the Peace and so escaped for the time being. Emboldened by this, he announced his intention of transferring his circus to Springfield, and opening "right under the nose of the State Board of Health." By advice of the Secretary, complaint and information were filed before the County Judge of Macon County, by whom Lightfall was committed for trial under bond of $500. Immediately after filing his bond he proceeded again with his show, but learning that another complaint had been entered against him, involving the deposit of another $500, and that it was the intention to file a new complaint for every repetition of his swindling practice, the "Indian Medicine Man" washed off his war paint, packed up his outfit, and set out for communities where they are more tolerant of charlatans and mountebanks than they are in the State of Illinois.

New Medical Journal.—The publication of a new weekly medical journal, *la Colonie Française* has been recently begun in Valparaiso, Chili. It is published in the French language, and is the organ of the French interests of the Pacific coast.

Death from Chloroform.—A case of death occurred at the Public Hospital at St. John, N. B., on August 1st. The chloroform was administered previous to extirpating the eyeball. About half an ounce of chloroform was administered. In about fifteen minutes after the first inhalation respiration became embarrassed, and then the pulse became affected, the patient became livid, and in five minutes respiration had ceased. Subcutaneous injections of brandy, ether, and a solution of strychnia, and electricity were administered, and artificial respiration practised without avail. The post-mortem examination showed a healthy condition of the organs.

A Second Supra-vaginal Amputation of the Uterus.—Dr. Margary, surgeon to the *Ospitale Maggiore*, of Turin, performed a second supra-vaginal amputation of the uterus, by the vagina, on June 4th. Four days afterward the state of the patient was satisfactory.

Porro Operations.—On June 28th Prof. Porro performed a utero-ovarian Cæsarean amputation, in the Maternity at Milan, on a rachitic woman with pelvic stenosis of the third grade, and a living child was extracted. The result as to the patient is not stated.

The patient upon whom he performed this operation on May 17th has left the hospital, having recovered.

Microscope for Clinical Thermometers.—M. Léon Bloch has recently perfected a small microscope, to be attached to clinical thermometers, by which the scale can be easily read. The microscope is very small and easily attached by means of two small bands which slide up and down the glass.

Honors to Dr. Koch.—His Majesty, the King of Prussia, has graciously granted permission to Dr. Koch to wear the Commander's Cross of the Royal Spanish Catholic Order of Isabella.

Honors to Professor Semmola.—We learn that Prof. Semmola is to be decorated with the cross of the Legion of Honor. The Academie de Médicine has requested this of the Government, and it seems that the request will be cheerfully granted.

Prof. von Budge.—A congratulatory address has been decreed to Prof. von Budge, of Greifswald, on the occasion of his fiftieth year jubilee.

Honors to Prof. von Arlt.—On July 6th, the professors of the Vienna Medical Faculty and about two hundred of Prof. von Arlt's students tendered him an ovation. Short addresses were made by Dr. Friedinger and Student of Medicine Zinsmeister, to which the Professor replied in a happy and graceful manner. Congratulatory telegrams were sent by many of his former pupils who were unable to attend.

M. Pasteur and His Work.—M. Pasteur is one of the few savants who have received substantial honors during their lives. On the day of the National Fête his native town of Dôle was the scene of a solemn public ceremony—the placing of a commemorative tablet on the house in which he was born. The illustrious savant was present, but his emotion so completely overpowered him that he was unable to return thanks, and his speech had to be read by his son-in-law.

The Chamber has just more than doubled his pension of 12,000 francs—making it now about £1,000 a year, with continuation to his widow and children. Lords Wolseley and Alcester may almost feel a pang of envy, but they may derive a sad consolation from the reflection that a want of grace in public acts of this sort is not confined exclusively to English assemblies. There were dissentients in the Chamber the other day—one of them a doctor, who had suggested vaccination for measles at least twenty years ago, and who seemed to think it hard that another should be rewarded for the discovery of a remedy of the same nature for a totally different disease. It was shown, however, that M. Pasteur had given his discoveries to the State, and that if he had chosen to profit by them he might easily have made a large fortune.

M. Paul Bert, his ancient rival in scientific discussion, gives a highly laudatory sketch of M. Pasteur's career of public usefulness. He began by experiments on the nature of fermentation, and his discoveries in this direction have had important practical results in the manufacture of beer and of wine. "Pasteurization" is now practised in the German breweries on a large scale. The results obtained attracted the attention of the Government, and M. Pasteur was requested to inquire into the silkworm disease, which was killing off all the silkworms of France and Italy. Till then he had hardly seen a silkworm, but he found out what was the matter with his patient. There was a microscopic parasite in him, developed from germs in the eggs, and by selecting sound eggs healthy worms could be reared. The French silk industry was saved, or would have been, "but for the unfortunate intervention of conditions of an economic order." Then a new group of patients was brought to M. Pasteur—the sheep and oxen of France, which were dying at the rate of from fifteen to twenty-five millions yearly of anthrax. It was a microscopic nuisance again, and M. Pasteur discovered his famous method of prevention by inoculation with "attenuated" microbes. This discovery, says M. Bert, is the grandest and most fruitful of all, France now vaccinates her flocks and herds wholesale. M. Pasteur has also turned his attention to the relief of the pig by vaccination.

His discovery of a preventive treatment for anthrax was preceded by a similar discovery respecting a disease which afflicts poultry, and which is known as chicken cholera. M. Pasteur is now willing to try what he can do with the cholera in human beings; and has courageously asked the Minister of Commerce to organize a scientific mission to proceed to Egypt to study the disease there under his guidance. The stimulus to discovery in other directions has not been the least important part of M. Pasteur's work, and a crowd of his followers are now experimenting to demonstrate the parasitic origin of all infectious maladies.

According to Prof. Huxley, M. Pasteur's labors alone are equal in money value to the whole 5,000,000,000 f. of indemnity paid to Germany in the late war. Yet a member of the Assembly thought it monstrous that he should receive a pension, while he was actually selling his "vaccine" at the cost price of a penny a tube.—*The Manchester Guardian.*

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending August 11, 1883, indicate that diarrhœa has increased, and that tonsillitis, intermittent fever, remittent fever, consumption, and whooping-cough have decreased in area of prevalence.

Including reports by regular observers and by others, diphtheria was reported present during the week ending August 11, and since, at sixteen places, scarlet fever at eleven places, and measles at fourteen places.

OBITUARY RECORD.—The death of DR. JEAN BAPTISTE PETIT, Physician-in-Chief to the Asylum for the Insane at Nantes, Honorary President of the Association of Physicians of the lower Loire, Member of the Council of the General Association of Physicians of France, is announced. He was a pupil of the recently deceased Dr. Archambault, having pursued his first alienistic studies under his direction, and has filled the position left vacant by his death since 1854.

NOTES AND QUERIES.

HYSTERO-EPILEPSY.

To the Editor of THE MEDICAL NEWS.

SIR: In reply to the query of Dr. Jno. C. White, of New York, dated July 30, 1883, I can only state that I made careful inquiries concerning the boy afflicted with hystero-epilepsy, whether he was addicted to the habit of masturbation. I could not get the patient to acknowledge masturbating, nor did the parents have any suspicion in regard to it. Of course, I should have mentioned this fact in my article.

Allow me to call attention to THE MEDICAL NEWS, page 376, September 30, 1882, to a case of hystero-epilepsy in a boy, reported in the *Progres Medical* for August 26, 1882, in which the reporter calls especial attention to the fact that there was no history of masturbation.

I am, yours obediently,
E. J. KEMPF, M.D.

FERDINAND, IND., AUGUST 14, 1883.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM AUGUST 13 TO AUGUST 20, 1883.

BAXTER, JEDEDIAH H., *Chief Medical Purveyor U. S. Army.*—To proceed to San Francisco, California, *via* St. Louis, Missouri, on public business connected with the Medical Department, and on completion thereof will return to his station.—*Par. 1, S. O. 185, A. G. O., August* 11, 1883.

BARNETT, RICHARDS, *Captain and Assistant Surgeon.*—Granted leave of absence for one month on surgeon's certificate of disability.—*Par. 2, S. O. 149, Department of the East, August* 10, 1883.

BURTON, HENRY G., *Captain and Assistant Surgeon.*—Relieved from duty at Fort A. Lincoln, D. T., and assigned to duty at Fort Assinniboine, W. T.—*Par. 1, S. O. 141, Department of Dakota, August* 11, 1883.

BENHAM, R. B., *First Lieutenant and Assistant Surgeon.*—Relieved from duty at Fort Assinniboine, W. T., and assigned to duty at Fort A. Lincoln, D. T.—*Par. 2, S. O. 141, Department of Dakota, August* 11, 1883.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE-HOSPITAL SERVICE, APRIL TO JUNE 30, 1883.

BAILHACHE, P. H., *Surgeon.*—To examine officers and cadets of the Revenue Marine Service, April 2, May 28, and June 4, 1883. To proceed to New York, N. Y., to make arrangements for the care of seamen, April 30, 1883. To proceed to Chattanooga, Memphis, St. Louis, Cairo, Evansville, Louisville, Cincinnati, Gallipolis, Wheeling, and Pittsburg, as Inspector, June 23, 1883.

MILLER, T. W., *Surgeon.*—Detailed as President of Board of Examiners, May 15, 1883. Detailed as member of Board for the Physical Examination of Cadets of the Revenue Marine Service, May 15, 1883.

WYMAN, WALTER, *Surgeon.*—Detailed as member of Board for the Physical Examination of Officers and Cadets of the Revenue Marine Service, May 1, 15, and 28, 1883. Detailed as member of Board of Examiners, May 15, 1883.

MURRAY, R. D., *Surgeon.*—To proceed to Pensacola, Fla., and take charge of Quarantine Service, May 21, 1883.

GASSAWAY, J. M. *Surgeon.*—Granted leave of absence for ten days, April 21, 1883. Detailed as Recorder of Board of Examiners, May 15, 1883.

SMITH, HENRY, *Surgeon.*—Granted leave of absence for thirty days on account of sickness, June 14, 1883.

FISCHER, J. C., *Passed Assistant Surgeon.*—Detailed as member of Board for the Physical Examination of Officers of the Revenue Marine Service, May 1 and June 4, 1883.

COOKE, H. P., *Passed Assistant Surgeon.*—Granted leave of absence for thirty days, May 15, 1883.

O'CONNOR, F. J., *Assistant Surgeon.*—Relieved from duty at Detroit, Mich., and assigned to temporary duty at Boston, Mass., May 10, 1883.

GUITERAS, JOHN, *Assistant Surgeon.*—Granted leave of absence for thirty days, without pay, April 3, 1883.

ARMSTRONG, S. T., *Assistant Surgeon.*—To proceed to Memphis, Tenn., for temporary duty, May 21, 1883.

BENNET, P. H., *Assistant Surgeon.*—Granted leave of absence for thirty days, on account of sickness, June 26, 1883.

AMES, R. P. M., *Assistant Surgeon.*—Granted leave of absence for fourteen days, April 3, 1883.

DEVAN, S. C., *Assistant Surgeon.*—Detailed as medical officer of Revenue Steamer "Corwin" during cruise in Alaskan waters, April 16, 1883.

BEVAN, A. D., *Assistant Surgeon.*—To proceed to Detroit, Mich., for temporary duty, June 11, 1883.

GLENNAN, A. H., *Assistant Surgeon.*—To proceed to Norfolk, Va., for temporary duty, June 26, 1883.

APPOINTMENTS.

The following candidates, having passed the examination required by the regulations, were appointed Assistant Surgeons by the Secretary of the Treasury, June 6, 1883:

ARTHUR D. BEVAN, M.D., of Illinois, and
ARTHUR H. GLENNAN, M.D., of the District of Columbia.

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. XLIII. SATURDAY, SEPTEMBER 1, 1883. No. 9.

ORIGINAL LECTURES.

THE TREATMENT OF THE CHRONIC MYELITES.[1]

A Clinical Lecture,

BY PROF. DUJARDIN-BEAUMETZ,

MEMBER OF THE ACADEMY OF MEDICINE, PHYSICIAN TO THE HOPITAL ST. ANTOINE, PARIS, FRANCE.

GENTLEMEN: If it were incumbent on me to give the history of the diseases of the spinal marrow, this lecture would be far too long, for on no subject has so much study been spent the past few years as on these spinal inflammations. Clinical medicine and pathological anatomy, based on physiological and anatomical studies which have had the spinal marrow for their subject, have enabled us to trace not only the tableau of diseases of the spinal cord and of its membranes, taken collectively, but also the various alterations which affect the different bundles composing the medullary axis. Unhappily, therapeutics has not followed the unceasing progress of clinical study, and we are still obliged, as far as treatment is concerned, to make use of the same medicinal means heretofore employed, and which are most generally inefficacious, so that, in a great number of cases, the idea of incurability accompanies the diagnosis of affections of the spinal medulla.

Nevertheless, as the medullary diseases are frequent; as, moreover, they have a long and progressive course, and will often claim your care, I have thought best to set forth the kinds of treatment most in use, recognizing at the same time their inefficacy. This inefficacy is easily understood when you take into account, on the one hand, the position of the spinal cord, which, surrounded by its membranes, is with difficulty reached by direct treatment, and, on the other hand, the very structure of the cord, which in such small volume comprises nerve-centres and conductors, that establish a direct communication between the brain and the mixed nerves.

The least alteration in the histological integrity of the spinal axis must then profoundly modify the functions of the parts over which this portion of the cord presides, and notwithstanding that we see tumors, even of considerable size, develop without apparent symptoms in certain portions of the cerebral mass, the least disorder, scarcely appreciable to the sight, in the substance of the spinal cord, will make itself manifest by symptoms of great gravity. This fact explains why it is only since the application of histology to medicine that we have been able accurately to diagnosticate the affections of the medulla, since in most cases the pathological alterations, invisible to the naked eye, can only be studied by means of high powers.

Standing, as we do, on therapeutic ground, our study of the myelites may be considerably abridged; for, directing our attention to the processes which determine medullary diseases, therapeutics need not distinguish the different myelites which are called systematic myelites, such as sclerosis of the posterior columns, sclerosis of the lateral columns, sclerosis of the anterior cornua, which clinical medicine and pathological anatomy have described as special morbid entities. What we have really to oppose is the connective-tissue induration which produces these pathological changes, and the therapeutic means to employ are the same in sclerosis of the posterior columns, and in sclerosis of the lateral columns.

When we take a general survey of the diseases of the spinal marrow, we find that they may be referred to three principal types. In the first group are placed the different degenerations which affect the medullary axis and its envelopes (cancer, syphilis, etc.); in the second, we meet the same alterations which we have studied in the preceding chapter on apoplexy, *i.e.*, the rapid and sudden disorganizations of the spinal cord (spinal hemorrhage, spinal *ramolissement*), produced by rupture, or serious lesion of the spinal bloodvessels. These are veritable medullary apoplexies. All the alterations of the third group have for their origin a hyperæmic and inflammatory process. It is with this last group, which is the most frequent, that we are now especially concerned; and if, in the anatomo-pathological details on which I am about to enter, I seem to vary somewhat from my customary method, it is because these details have, from the standpoint of therapeutics, a preponderating importance.

Inflammation of the spinal medulla presents itself under two distinct forms: in one, the hyperæmia affects all the constituent parts of the cord, and causes their speedy disorganization; in the other, the inflammatory process, whether primitive or secondary, attacks only the connective-tissue element, determining a hyperplasia of the neuroglia, which speedily chokes out and destroys the nervous elements.

Here, then, we again meet with that great division of inflammations which we have already seen produce so much mischief in the kidneys and in the liver, and just as we have interstitial and parenchymatous nephritis and hepatitis, so also we have interstitial and parenchymatous inflammations of the spinal cord.

As for parenchymatous myelitis, I have shown in my *thèse d'agregation* on acute myelitis the march of the inflammatory process, and I have dwelt especially on the first period called the stage of tumefaction, and which results not only from the vascular hyperæmia, of which the medulla is the seat, but also from the swelling of the neuroglia and the nervous elements.

In interstitial myelitis, the neuroglia appears alone to be affected. By the organization of its cellular elements, under the influence of an indurating process, it chokes out the nerve-cells or tubes. Vulpian, in his remarkable lessons on the diseases of the spinal cord, has dwelt at great length on the pathogeny of this sclerous process, especially under the head of locomotor ataxia, and he adopts the view that the proliferation depends on primitive irritation of the nervous elements. But this is not the only opinion advanced: some, as Ordonez, maintain that the vascular alterations are the primitive cause of the sclerosis; others affirm that the hyperplasia of the neuroglia is primitive. I believe that both hypotheses are correct, and that, from a therapeutic standpoint, we ought to make a great account of them.

What can medicinal agents accomplish in cases of parenchymatous or interstitial myelitis? In parenchymatous myelitis we cannot do much, except in the period of tumefaction, and as we cannot influence either the neuroglia or the nerve-tubes, our sole action must be on the circulation of the cord. When, however, the exudation has taken place, and the medullary substance is destroyed, it will be impossible for us to repair the disorders which result from the softening. In the case of interstitial myelitis, we are impotent to arrest the hyperplasia of the neuroglia, and the disorders which are its consequence, and all that we can do is to diminish the nervous irritation which this hyperplasia determines, or the hyperæmia of which the latter is the result.

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[1] Translated from advance sheets by E. P. Hurd, M.D., of Newburyport, Mass.

To sum up, then, our therapeutic endeavors must first be directed to combating the primary causes of the inflammation; secondly, to opposing the hyperæmia of the cord. Apart from this twofold duty, we are powerless, and the utmost that we can do is to mitigate the consequences which result from the medullary changes, and which are so detrimental. I shall briefly review the various therapeutic agents which we can employ, then make special application of them to the different spinal affections.

To fulfil the first of these indications is often easy, and in the case of myelitis by traumatism or by compression, it will be sufficient to remove the foreign body which irritates or injures the cord to cause disappearance of the resulting inflammatory symptoms. In the case of Pott's disease, with lesion of the vertebræ, special surgical appliances are necessary to remedy the spinal deformity which produces compression on the cord, and causes paralysis. In the case of syphilitic gummata and exostoses, the specific treatment will sometimes remove the inflammation and its products.

In other cases, we can do much to prevent inflammatory mischief by hygienic measures. Whether the medullary sclerosis be primitive and the result of repeated congestions of the spinal cord; whether it be secondary, from irritation of the nervous elements (Vulpian), it is not the less true that every excessive exercise of function on the part of the cord and its integral divisions may be a predisposing cause of sclerosis. Therefore, forced marches, too prolonged muscular labors, may determine veritable myelites, which are described under the name of myelitis from *strain* (*surmenage*), and which are observed in animals as well as in men. The abuse of the genital functions, and, in particular, coitus while standing, enter into the same group, and have often been invoked as the determining cause of *tabes*. You readily see, then, how much may be done by hygienic measures of prevention when once these causes are known, and I pass to the second indication, which is to combat the medullary hyperæmia.

The circulation in the spinal cord is very active; a multitude of venous and arterial vessels from numerous sources form around its bony canal and membranes a rich vascular plexus, which it is difficult for us to reach by any direct means. As, however, the spinal vessels and the vaso-motors which innervate them can be affected reflexly (vide Vulpian, *Appareil Vaso-Moteur*, t. ii. p. 49), you readily understand that by an action limited to points more or less distant from the spinal axis we may modify the circulation in the cord, and it is on this action that revulsive medication is based; a kind of treatment which is first in importance in spinal affections.

Although tradition from the dawn of medical history has affirmed the beneficial influence of energetic revulsion in diseases of the spinal cord, in our time, certain physicians have denied this favorable action, and have maintained that revulsion increases the suffering of patients without ameliorating their condition. This, gentlemen, is a mistake, and facts of experimental physiology confirm most unequivocally the results which clinical medicine has accumulated during the ages.

What, then, has experimental physiology taught us on this point? From a great number of conclusive observations, I select the following: You are all familiar with the results which Vulpian obtained in electrizing a nervous branch communicating with the intrathoracic chain of the great sympathetic; there was most marked contraction of the bloodvessels of the region of the spinal cord, from which was derived the intercostal nerve with which the nervous filament electrized was in relation. In his numerous and remarkable researches on the circulation of the spinal cord, Brown-Séquard, after tying or irritating the nerves of the kidneys or suprarenal capsules, observed a contraction of the bloodvessels of the cord on the side which was irritated. Frinberg obtained a paralysis, *a frigore*, in a hare, on spraying with ether the skin of the back which he had previously shaved. As you are well aware, on this very reflex action the theory of so-called *reflex* paralysis has been based, also of myelitis and meningomyelitis *a frigore*. Without entering into the long discussions which have arisen on this subject, it has been determined both by experiments on animals and by clinical experience, that external excitations made on the skin do modify the circulation in the spinal cord and its envelopes. Let us now examine the agencies utilized in revulsive medication in these affections. Everything has been employed, from frictions with irritant ointments to the cautery and moxa. The latter revulsives, which were till recently the most in use, are to-day being abandoned, being advantageously replaced by punctiform galvano-cauterizations. The use of caustic potash or Vienna paste is likely to be attended with certain inconveniences, and in particular, that of producing suppurating sores over the vertebral column; these last some time, and are not without danger to patients who are obliged to maintain the dorsal decubitus, and whose skin performs its functions badly by reason of trophic disturbances determined by the medullary affection.

The electrical points on the contrary, rendered so easy of management by the invention of the cautery of Paquelin, present all the advantages of energetic cauterization without the least inconvenience. Moreover, these cauterizations, which do not cause troublesome sores, may be renewed every eight days. You practise them along the spinal column, right and left of the middle line, punctiform cauterizations in parallel series, and in number varying according to the exigency of the case. These cauterizations are preferable to vesication by the cantharidal blister, for the vesicatory, besides removing the epidermis, determines trouble in micturition, a function generally more or less disturbed in diseases of the spinal cord. In certain cases the seton may be employed; this is one of the most powerful revulsives that I know of, but it is of especial utility in affections of the brain and upper portions of the spinal cord.

To the revulsive treatment we may join the application of cold, which also, as we have seen by the experiments of Frinberg, may modify the circulation in the spinal cord. But in order to obtain durable effects, it is necessary to prolong the applications of ice, and this is always inconvenient. Pulverizations of ether by the spray apparatus, if they could be continued sufficiently long, would be indicated in these cases where the physiological effect of cold is desired.

Hydrotherapy applied to the treatment of medullary affections, is a two-edged sword, which must be managed with great prudence. In fact, it does not cause anæmia of the spinal cord. In the majority of cases it congests it, and this it is which explains the successes and the aggravations which have been obtained. Successes, when one has to do with those paralyses *sine materia*, which appear in the course of neuroses, or those which have a dyscrasic origin, and which accompany diphtheria and other acute diseases, also those paraplegias observed in anæmia and chlorosis; aggravations, when the indication is to combat inflammatory and sclerous processes, for in these cases hydrotherapy, by inducing congestion of the cord, favors rather than opposes the hyperplasia of the medullary neuroglia.

To avoid these disadvantages, warm douches have been advised, or tempered douches, as Beni Barde has recommended, but it is always important when you employ either cold douches or tempered douches, to examine with care the cutaneous sensibility, often strangely perverted in patients affected with spinal diseases.

We have seen that electricity applied over the bony canal of the spinal cord modifies the medullary circulation; from this has resulted the employment of electricity in the treatment of congestions and inflammations of the cord. Two methods are in current practice. In the one you make use of faradic currents (here the portable battery does good service), and with the electric brush you make energetic revulsion along the vertebral column. I have seen happy results from this faradic treatment in tabes dorsalis. In other cases you apply galvanic currents up and down the spine; there has been much dispute about the direction of these currents, some being of opinion that ascending, others that descending, currents are preferable. I believe that the direction is a matter of little consequence, and that one may use indifferently either ascending or descending currents. To cauterizations, to applications of ice, to electricity, we must add certain internal medicaments, of which the purpose is to diminish the congestion, or the connective-tissue hyperplasia which results from it. As for certain of these medicines, their application is the result of the knowledge of their physiological properties; as for others, empiricism has led to their adoption and usage. We will pass rapidly in review the greater part of these remedies.

The curious property which ergot of rye possesses of causing contraction of the capillary network has been utilized in affections of the spine; and Brown-Séquard is one of the most strenuous partisans of this therapeutic employment of ergot. The results which I have obtained from this medicament in spinal sclerosis have not answered my expectations, and I believe that the use of ergot in these diseases is based on theoretical considerations rather than on sound clinical experience.

Ergot is given in substance or in the form of ergotine or ergotinine. The hypodermic method of administration may be adopted, injections being made over the spinal region with ergotine or ergotinine. The dose of the latter ought not to exceed two milligrammes (one-thirtieth of a grain), and one milligramme is enough for an ordinary dose.

Strychnia has been recommended in the treatment of the diseases of the spinal cord, but, as Vulpian remarks, the therapeutic action of this alkaloid having no influence on the morbid process, the cause of the paralysis, and strychnia, moreover, being incapable of removing the disorders which result from the inflammation, no curative effects can be expected from this medicament in acute or chronic spinal affections. I go further, and add, that often the action of this drug is injurious by reason of its irritating influence on the medullary axis. It is best, then, to be very chary in the use of strychnia; and even to discard it altogether in congestions of the cord, and never to use it except in the case of paralysis called essential, or *sine materia*.[1]

It has been claimed that iodide of potassium has also an action on the circulation of the spinal cord, and that it is capable of anæmiating it. I believe that the good effects which have been obtained from this medicament are not the result of the influence of the iodide on the circulation, but of its specific and resolvent action on products of a syphilitic nature. A great number of tabetic patients are syphilitic, and are therefore likely to be benefited by the iodide.

Bromide of potassium has an important *rôle* in the treatment of diseases of the spinal cord, not because it has any direct effect on the phlegmasic process acute or chronic, but because it tends to diminish the excito-motor power of the cerebro-spinal axis; the bromide, then, is indicated whenever signs of irritation or excitation of the spinal medulla supervene.

Empiricism has made great account of two medicinal agents in the treatment of medullary sclerosis, nitrate of silver and phosphorus.

Nitrate of silver was recommended for the first time in 1861, by Wunderlich,[2] but it is especially to Charcot and Vulpian that the employment and popularity of this remedy in locomotor ataxia are to be ascribed.

Nitrate of silver is given in pills of one centigramme; at first one, then two, then three, then four of these pills a day, the last dose never to be exceeded. This medication, which is only of utility after the inflammatory symptoms have subsided, may give you in some cases amelioration and even cure, if the observations reported by Wunderlich, Rosenthal, Hammond, etc., may be relied on; but it is well to bear in mind that these are exceptional cases, and for my part I have to confess that I have never obtained, even from the prolonged use of nitrate of silver, any results worth mentioning.

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[1] Fouquier has remarked that when strychnine is given to paraplegic patients, convulsive manifestations in the paralyzed members often ensue. When the spinal cord is no longer in communication with the brain, its excito-motor power is augmented, and strychnia greatly enhances this reflex excitability. When, in a frog, you cut the spinal cord transversely, and inject strychnia, it is in the inferior members that the first effects of the poison are seen; but as Vulpian well observes, in order that this action may be produced in paraplegic persons, it is necessary that reflex excitability be preserved in the paralyzed limbs. (Vulpian, *Substances toxiques et médicamenteuses*, Paris, 1882, p. 580.)

[2] Siredy noted the good effects of bromide of potassium in a case of locomotor ataxia; effects already witnessed by Vulpian. His dose was two grammes, gradually increased to six grammes each day.

Wunderlich was the first to administer nitrate of silver in this disease. Out of five cases treated by him, in 1861, there was one recovery. The year following Charcot and Vulpian published a monograph on the subject. They administered the nitrate in pill form, one centigramme; at first two, then three, and seldom more than four pills a day. Of five cases treated by them with this remedy, there was in all great amelioration; the lightning pains disappeared, and the muscular movements gained in force and precision.

After the publication of Charcot, Moreau, then Beau reported cases of cure by nitrate of silver. In Germany, Küchenmeister reported observations in which the medicament produced no effect. In 1863, Wunderlich published in *Archiv der Heilkunde*, another memoir in which were recorded cases of amelioration and cure under medication by nitrate of silver. Rosenthal, Hammond, etc., have also noted recoveries in ataxia from nitrate of silver.

Teissier, of Lyon, after showing that the locomotor ataxia described by Duchenne, of Boulogne, and the tabes dorsalis of Romberg, are one and the same disease, is emphatic in his praises of nitrate of silver in this malady. The results are variable, sometimes there is improvement in the power of muscular coördination, sometimes only the painful manifestations are relieved.

(Wunderlich, *Archiv der Heilkunde*, 1861-1863; Charcot and Vulpian, *Bull. de Thér.*, t. 62, p. 481; Moreau de Tours, *Union Méd.*, Oct. 1862; Beau, *Bull. de Thér.*, 1863, t. 64, p. 315; Trousseau, *Bull. de Thér.*, t. 64, p. 82; Hammond, *On Diseases of the Nervous System*, p. 709; Tessier, *De l'ataxie loc. et de son traitement*, 1864.

Do not forget that the medullary sclerosis for which nitrate of silver is employed, does not progress in a uniform manner, and that it presents periods of ascension, and periods of arrest; it is easy then to understand that according to the precise time in the evolution of the disease in which the medicament is administered, amelioration or aggravation of the symptoms may be observed.

How does the remedy act? We are wholly ignorant. Does imbibition of the silver salt by the neuroglia hinder the proliferation of the latter? Does the medicine act on the nervous elements themselves? These are questions which we cannot answer.

I was the first (in 1868) to propose the use of phosphorus in locomotor ataxia.

Delpech had several years before (in 1863) applied phosphorus to the treatment of certain paralyses from chronic poisoning, and in particular to that produced by sulphide of carbon. I have continued this phosphorus medication, and, although I have never observed a cure by this remedy, I have in many instances noted an amelioration, characterized by a sensation of increase of force, and diminution of incoördination. But the same reservations which I made *à propos* of nitrate of silver, ought to be made here, and one may well ask if in many cases the amelioration obtained is not rather the consequence of the natural march of the disease than of the action of the medicine. My pupil, Dr. Eugene Lemaire, has published in his remarkable thesis on the employment of phosphorus the greater part of those observations.[1]

This phosphorus medication needs to be closely watched, and I am going to enter into certain details which appear to me to be necessary. When I commenced my experimentation with phosphorus, I immediately stumbled against a difficulty, the unreliability and the danger of the preparations in use; and I proposed to substitute for the phosphorated oil of the codex,[2] solutions of phosphorus in chloroform, of definite strength, and I also had capsules made containing one milligramme ($\frac{1}{60}$ grain) of phosphorus. But attention was awakened on this point, and thereupon successively appeared the monographs of Mehu and Vigier.

Mehu showed that while the *oleum phosphoratum* of the codex, as ordinarily prepared, is of uncertain strength, a sufficiently good solution might be had by heating the oil very hot, and henceforth unalterable capsules of phosphorated oil might be obtained, each containing one milligramme of phosphorus. Vigier, by his studies on the metallic phosphides, showed the advantage which might be derived from these preparations, and he introduced phosphide of zinc into therapeutics.[3] These capsules of phosphorated oil, and Vigier's pills of phosphide of zinc, are to-day the preparations of phosphorus most in use.

When you prescribe phosphide of zinc, do not forget that four milligrammes represent one milligramme of phosphorus. Whether you make use of granules of phosphide of zinc containing four milligrammes, or capsules of phosphorated oil containing one milligramme, you ought to observe the following rules: Commence with one pill, or one capsule, and increase gradually till ten are taken in the twenty-four hours; continue this dose three or four days, then suspend the medicine for five days, to renew the treatment by commencing with one capsule. These interruptions in the phosphorus medication are necessary in order to avoid accumulation of action, and to permit the medicine to be eliminated. In following these rules the phosphorus treatment can be continued with safety for months or for years. I add that in order to render the medicament more tolerable to the stomach, you would do well to order the phosphorus to be taken at meal time, you will then avoid in great part the eructations of *lucifer-match* taste which follow the administration of this remedy. There is another caution to be observed in prescribing phosphorus in tabes. It will not do to give it when there are any symptoms indicating any considerable degree of congestion or irritability of the nervous system, nor in the case of gastro-intestinal troubles; moreover, to get any good from the phosphorus treatment it must be continued a long time.

On what is this action of phosphorus in locomotor ataxia based? Here, as in the case of nitrate of silver, we are obliged to make hypotheses. My own theory is the following. Ranvier, in his experiment with phosphorus, has shown that when this metalloid is inserted under the skin of animals, you do not provoke inflammatory disorders, but you determine arrest of the formative and nutritive operations of the histological elements. It is possible that in the spinal cord phosphorus thus opposes the proliferation of the neuroglia; but, I repeat, this is only a hypothesis, and I give it for what it is worth.

Now that we have taken a general survey of the different modes of treating medullary affections, let us study the indications of treatment in the different forms of myelitis. I cannot here speak of all the varieties of spinal inflammation — their number is considerable. You will find in the work of Grasset a table which gives a good summary of all the kinds, and which will enable you to judge of their number. I shall only call your attention to those cases which you will oftenest be called to treat, the congestions of the spinal cord, the meningo-myelites, the myelites by compression, sclerosis of the posterior columns, disseminated sclerosis, and, in fine, that known as atrophic paralysis of infancy, or sclerosis of the anterior cornua.

The congestions of the spinal cord are frequent, and their causes are multiple; they do not generally entail anything more than a relative incapacity or paresis of the lower extremities, a paralysis in its nature curable. As in every hyperæmia, the first indication is to suppress the cause of which it is a manifestation; and whether the medullary hyperæmia depends on rheumatism, on uterine or hemorrhoidal congestion, on too prolonged dorsal decubitus, on exaggerated fatigue, or on sexual excesses, your therapeutics should be varied to meet the causal indications. Rheumatism is one of the most frequent causes of congestion of the spinal cord, and, for my part, I remember to have observed, with Dr. Lasegue, during my earlier student days, a very curious case of sudden paraplegia in a kitchen maid; it was a result of acute articular rheumatism, and disappeared when the joints became affected. In these cases you understand the utility of dry or wet cups along the spine, of steam baths, and salicylate of sodium. At other times you will have to deal with simple paralysis, *a frigore*, reflex paralysis from the impression of cold on the cutaneous surface. Here the treatment is different; besides the ordinary revulsives, such as blisters to the spinal region, you may employ sudorifics, and particularly pilocarpine, which, by the cutaneous congestion which they produce, have a favorable effect on the paralysis. Prolonged fatigue, by reason of the physiological congestion which it occasions in the spinal cord, is a factor in the etiology of this affection; here you must enjoin absolute rest, as well as revulsion. This word *rest* leads me to speak of the effect of dorsal position in the affections of the cord. Lying a long time on the back induces, as you well know, passive congestion of the spinal medulla, and it is probably to this congestion that we are to attribute the nocturnal erections which take place during sleep. You understand, then, that this fact has a certain influence in affections of the cord, and you will see patients predisposed to spinal congestion who, by reason of the dorsal decubitus of the night can scarcely support themselves on their feet in the morning. This paresis disappears after standing a short time, with disappearance of the congestion which caused it.

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[1] Dujardin-Beaumetz, sur l'Emploi du phosphore en médecine et en particulier dans l'ataxie locomotrice progressive. *Bull. Gén. de Thér.*, 1868, t. lxxiv. pp. 16, 157, 203, 302.

N. Gueneau de Mussy, On the Treatment of Mercurial Trembling by Phosphorus. *Gaz. des Hôp.*, 1868. Nos. 48 and 50.

Lemaire (Eug.), On the Therapeutic Employment of Phosphorus in Certain Affections of the Nervous System. *Thèse de Paris*, 1875. No. 143.

[2] The phosphorated oil of the codex contains two grammes (ʒss) of phosphorus to one hundred grammes (℥iij, ʒijss) of oil of sweet almonds, and is an uncertain preparation

[3] Vigier, On the Therapeutic Employment of Zinc Phosphide (*Bull. Gen. de Ther.*, t. lxxiv. p. 268).

This fact has a certain importance, and Brown-Séquard has derived from it therapeutic hints. In anæmia of the spinal cord, he directs the patient to lie on his back, while in spinal hyperæmia he is to lie prone on his belly.

Thus far I have said nothing of bloodletting, which has been much employed in affections of the spine. Very much vaunted formerly by Ollivier, who advised in these cases, besides general bleeding, leeches to be applied in great number to the dorsal region, and wet cups, this antiphlogistic treatment is to-day well-nigh abandoned. At the same time, wet and dry cupping may render considerable service in active congestions of the spinal cord, and it is a therapeutic measure not to be neglected.

Meningo-myelitis, whatever may be the cause, is one of the medullary affections the most frequently observed. It is characterized by two marked symptoms; first, by pains, often severe, coming in paroxysms, and bearing considerable resemblance to the *douleurs fulgurantes* of ataxia and to sciatic neuralgia; secondly, by impotence, more or less complete, of the inferior extremities, with conservation of sensibility, the external portions of the medullary columns being alone affected. Here energetic revulsion is indicated, preferably by cauterizations along the spine. You must also assuage the pain, for this is one of the symptoms of which the patient most complains. All the various remedial measures which I spoke of under the head of the neuralgias will have their place. Double sciaticas ought always to make you suspect meningo myelitis. But the most effectual means for allaying the pain is the subcutaneous injection of morphia, and, in fact, this alone will in many cases bring relief. You must also watch the functions of the bladder and intestines, which are often profoundly disturbed in these cases of paraplegia due to spinal disease.

As for the condition of the bowels, we have either obstinate constipation or fecal incontinence. The constipation will yield to drastic purgatives; these medicaments not only restore regular stools, but they act as revulsives and may thus modify the circulation in the cord and its membranes. In certain cases the most violent purgatives cannot overcome the constipation; this is because the rectum is paralyzed and allows itself to be distended beyond measure by fecal accumulations. Here you will have to break up the fecal mass with the finger, or scoop it out with a spoon in order to clear the rectum.

As for fecal incontinence, the most scrupulous pains must be taken for cleanliness; nothing is more important in myelitis, for trophic troubles are of common occurrence, and often, in spite of all your care, extensive bed-sores will form over the sacrum, and even around the anus, as a consequence of dorsal recumbency. In these cases the fracture-bed will render great service; it enables you readily to dress the bed-sore, and to vary the position of the patient.

The disorders which meningo-myelitis inflicts on the urinary organs are still more serious. At first the patient often experiences some tenesmus, due to spasm of the bladder, tenesmus which soon gives place to retention or to incontinence. For the retention you will be obliged to use the catheter, notwithstanding the liability to cystitis with purulent urine which it occasions. For the latter evil, and to prevent putrid absorption, it will be necessary to wash out the bladder with solutions of carbolic, boracic acids, resorcine, etc., at the same time giving internally benzoic acid, oil of sandalwood, turpentine, copaiba, boldo or buchu, which are antagonists of fermentation.

If retention of urine has inconveniences, incontinence has quite as grave; the incessant flow of urine irritates the genitals, soils the bed-clothes and the clothing, and augments causes already existing of local gangrene and erysipelatous inflammation of the skin. In the case of male patients, urinals have been perfected by the use of which they can escape these accidents, but it is not so with the paraplegic female, who must suffer all the ill consequences of the incontinence.

When the inflammatory symptoms have subsided, then much can be done to restore the power of movement to the lower extremities. Here hydrotherapy, massage, frictions, electricity, may render real service; but these measures should never be employed in the acute stage of the affection, for they would cause aggravation of the disease.

Myelitis by compression demands the same local treatment as meningo-myelitis; it demands also a special treatment directed to the removal of the cause. If the latter be cancer of the cord or its membranes, we can do nothing but alleviate pain by hypodermic injections of morphia. If it be Pott's disease, we can by an appropriate plaster jacket, as Sayre, of New York, recommends, do much toward straightening out the vertebral column, and removing the deformity which is the cause of the compression. If the cause be syphilis, nothing can be more serviceable than the injections of peptonate or albuminate of mercury, which not seldom cause the myelitis and paraplegia rapidly to disappear.

I come now to the treatment of the medullary scleroses, and especially of the typical form oftenest met with in practice, progressive locomotor ataxia. This word *progressive*, by which Duchenne characterized the pathological entity which he described, indicates the little control which therapeutics has over this morbid condition, and in so designating it, Duchenne pronounced a sentence of incurability. Since then, therapeutics has not lifted this sentence, and it is best to bear in mind that this affection is almost always above the resources of our art. Nevertheless, ataxic patients have been cured, and are now being cured; but these are exceptional cases, and despite periods of calm and respite which may last months and even years, the ataxic individual sees his disease progress slowly or by bounds.

These cases of cure concern more especially syphilitic patients. Without adopting altogether the opinion of Fournier, who will have it that all ataxic patients are syphilitic, it is nevertheless well to remember, that in a great number of cases syphilis is the cause of tabes, and when the affection is taken at the commencement, an appropriate antisyphilitic treatment may cure it. But it will not do to take for granted that it is always so; and in a great many instances in which, in syphilitic patients, there exists some form of medullary sclerosis, the most energetic and the most violent treatment will not favorably modify the march of the disease. However, the fact of syphilis coexisting with tabes dorsalis, always gives a hope and a chance for your patient, which you ought to improve.

There are neuropathies which sometimes present ataxic symptoms; these false ataxies are often completely cured by hydrotherapy, or a course of treatment at the thermal springs.

The first condition of treatment of sclerosis of the posterior columns, is to avoid all circumstances which tend to provoke congestion of the cord, a congestion which almost always precedes the hyperplasia of the neuroglia. You should then prohibit, in the case of these patients, prolonged muscular fatigue (a fatigue which is the more easily induced the more voluntary force the patient is obliged to expend in his movements); sexual intercourse ought also to be forbidden. You should also have recourse to energetic revulsion, and in particular to punctiform cauterizations along the vertebral column, and this especially when signs of irritation or congestion of the cord appear. You can also use in the periods of remission nitrate of silver or phosphorus, following, in the case of phosphorus, the rules which I have laid down. You will almost always obtain with this phosphorus medication an amelioration, more perceptible to the patient than to yourselves; he will tell you that he feels stronger, and that he has a better command of his limbs, at the same time that an examination does not disclose any real progress. I have never observed genital excitation following the administration of phosphorus, and I very much doubt the aphrodisiac properties which have been ascribed to this medicament.

The lightning pains are among the most formidable complications of the disease; here our "sheet-anchor" is hypodermic morphia, despite the fact that ataxic patients are very likely to become morphomaniacs (a great many at the present day are such). Sometimes extremes of temperature diminish notably this pain; I have lately had under my care a French engineer, who, when constructing railroads in Russia, could succeed in calming the *douleurs fulgurantes* of his disease only by surrounding his feet and legs with ice. In some patients heat has the same effect. In these cases Chapman's rubber bags for pounded ice or hot water will be useful. Nerve-stretching has been proposed for these *douleurs fulgurantes*. This elongation of the sciatic nerve, practised for the first time in Germany by Langenbuch, in 1879, in France, by Débove and Gillette, in 1880, and since repeated by Esmarch, Erlenmeyer, Sury-Bienz, Hirschfelder, Rzehaczek, has not given any definite results, and though causing a temporary amelioration, it is often accompanied by trophic disturbances of great intensity. Balneotherapy and thermal treatment have an important *rôle* in the therapeutics of ataxia. For my part, I have abandoned hydrotherapy in the treatment of medullary sclerosis. I believe that cold douches can only augment or provoke spinal congestions, and I am happy to see that most of my colleagues of the Society of Hydrology are of the same opinion.[1]

If hydrotherapy has rather inconveniences than advantages in the treatment of ataxia, it is not so with thermal treatment. Three stations claim preëminence, Neris, Balaruc, and Lamalou; the thermal establishments of the latter seem to be most efficacious in chronic myelitis.

Finally, to these balneotherapic means, we must add electricity. Onimus and Rosenthal have insisted on the curative action of continuous descending currents in the affections of the spinal cord. It is a means which you ought always to employ, without expecting always to obtain much amelioration.

On the other hand, electricity has a preponderating *rôle* in the atrophic paralysis of infants, which, as the recent researches of Roger and Damaschino and of Laborde have shown, is to be attributed to central myelitis affecting the anterior horns, and destroying the large multipolar cells of that region. These alterations have as a consequence the atrophy or destruction of important groups of muscles. Our only means of combating this disease are galvanism, gymnastics, and hydrotherapy, in a word, all those agencies which can excite nutrition in atrophied parts. These means have real efficacy only at the onset of the disease; unhappily the first periods often pass unnoticed, and it is not till the later periods of the malady that our help is demanded, and then little can be done.

The same treatment is applicable to a disease which resembles the atrophic paralysis of early childhood. I refer to progressive muscular atrophy, which in accordance with the pathological studies of the French school of medicine, and I refer particularly to the labors of Hayem, Vulpian, Troisiêr, Charcot, and Gombault, ought to be attributed, like the atrophic paralysis of early childhood, to chronic parenchymatous myelitis, localized in the anterior horns of gray substance. In these cases constant currents applied methodically may have a happy influence.

Such, gentlemen, are the principal considerations which I have to offer *à propos* of affections of the spinal cord; you will find them quite incomplete, but from a therapeutic standpoint they are necessarily so, by reason of their very incurability. These diseases of the spinal medulla, in fact, constitute the most gloomy chapter in therapeutics.

ORIGINAL ARTICLES.

A PECULIAR AFFECTION OF THE NAILS IN HEREDITARY SYPHILIS.

By ARTHUR VAN HARLINGEN, M.D.,
PROFESSOR OF SKIN DISEASES IN THE PHILADELPHIA POLYCLINIC.

The interest which attaches to every symptom of hereditary syphilis, and the importance of obtaining all possible information as to the history of individuals suspected of inherited syphilitic taint, make it desirable that each manifestation should be studied and known so far as possible. For this reason the affection of the nails which I am about to describe, merits an attention which its intrinsic importance would not perhaps demand.

Florence M., three months of age, was brought by her mother to the Polyclinic for treatment on May 30th of the current year. The history given was scanty and unsatisfactory, but evidently nothing was withheld purposely. The child's father was said to have had some well-marked general eruption of the skin six years previously, but had never shown any other sign of disease so far as his wife's knowledge went. The mother, herself, seemed to enjoy perfect health, and had never had any symptoms which could point to syphilitic disease. She had never had any miscarriages.

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[1] Langenbuch, Berliner klin. Wochensch., No. 48, 1881. Esmarch, Deutsche med. Wochensch., 1880, No. 19. Erlenmeyer, Centrablatt für nerv. und psych., No. 21, 1881. Débove, Gaz. des Hôp., 11 Dec. 1880. Gillette, Union Med., No. 17, Jan. 1881. Sury-Bienz, Deutsch. med. Zeitung, 1881. Du traitement de l'ataxie locomotrice (Soc. d. hydrologie Med. Séance du 4 November, 1878).

The infant was quite healthy at birth, but when not more than three weeks of age, a number of bullæ showed themselves upon the soles of the feet. These disappeared spontaneously shortly after, and later a more generalized erythematous and papular eruption began to make its appearance and spread continually up to the time the little patient was brought to the Polyclinic for treatment.

On examination the child was found to be fairly well-nourished, but fretful, with a characteristic weary-looking, aged expression, the frontal protuberances of the cranium somewhat enlarged, the lateral prominences not noticeably protuberant, the nostrils partially occluded but not showing any purulent discharge, small characteristic fissures and cicatrices at the angles of the mouth, and a number of small split-pea sized erosions or patches on the dorsum of the tongue. A well-marked eruption of a peculiar fawn color, when viewed as a whole, and made up of numerous variously sized papules covered the scalp, face, arms, thighs, legs, palms, and soles. About the buttocks these papular lesions seemed inclined to rise above the surface and become hypertrophic, with an abraded surface, forming true moist papules or what used to be called "condylomata lata."

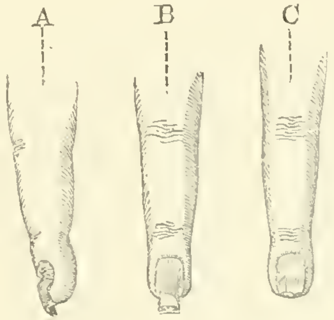
The most peculiar feature presented was, however, in the condition of the finger and toe-nails, which had all submitted to marked alteration in appearance, the result of the syphilitic disease. The child's mother was unable to say when and how this alteration in the nails had first commenced, but she remembered that nine weeks ago when the infant was not more than three weeks old the nails began to show a yellow discoloration in the centre, and to take on an arched shape as if shrinking together from the sides. The nails of the feet were affected first; later, those of the hands, and they gradually assumed the appearance shown when the child was brought for treatment.

Examination showed the nails of both fingers and toes to be alike affected, being partly curled in on their lateral edge until they occupied less than one-half or scarcely even one-third of the entire width of the nail-bed. Growing out some little distance beyond the ends of the fingers and toes the nails bent over in a claw-like shape so as to resemble the claws of a dog or other animal, a resemblance made stronger by the dark, brownish discoloration of the nails.

The sketch which I made shows the appearance presented by the nails at this time in the figures A and B of the cut; fig. C shows the appearance of the nails when gradually recovering their normal appearance under the influence of treatment.

The surface of the contracted portion was furrowed with fine transverse markings, while the proximal portion of the nail-bed from which it sprang was thrown up into rugous folds. The nail-bed alongside of the contracted nail was somewhat roughened and slightly brownish. The diseased nails were not thickened, and were not in any way misshapen, except for the perfectly uniform changes just described, which involved all the nails in precisely the same manner.

The infant was ordered daily baths, each containing ten grains of corrosive sublimate, and later was ordered one grain of iodide of potassium in water thrice daily. Under this treatment a rapid amelioration of all the symptoms ensued, the lesions of the skin soon disappeared, the nasal passages became clear, the child became more cheerful, and the deformed nails were gradually thrown off and replaced by healthy ones. By the end of a month the child was to all appearance well, excepting, of course, the entire growth of new nails, which was still in progress. The medicine, however, was ordered to be continued several months longer.



There is not very much to be said with regard to this case beyond pointing out its salient peculiarities. It is in some respects I think unique. At least I have never met with an account of a similar case. Jullien (*Traité des Mal. Vénèriennes*, p. 1009) says that the palmar and plantar skin affections, which are so common in hereditary syphilis would naturally lead to the supposition that the nails would often be involved, and such indeed is the case. In squamous onychia the nails are surrounded by a red areola, the horny layer is striated longitudinally and has a dull, tarnished look; under the microscope the epithelial layer of the bed of the nail is seen to be hypertrophied and secretes irregular horny lamina. This dry *onyxis* often gives occasion to the fall of the atrophied nail and its replacement by a new one, which at first healthy, submits progressively to the same alteration. In this connection may be mentioned the ulcerative form of onyxis sometimes met with in hereditary infantile syphilis, which does not differ essentially from that met with in the acquired syphilis of the adult. This too sometimes occurs on many fingers simultaneously.

In my case above described there was no ulcerative action around the nail, nor even any appreciable amount of onychia, it was merely a very unusual form of dry onyxis. I should add that no sign of return has shown itself, the nails have assumed for the most part a perfectly healthy appearance, and in a few months at furthest all trace of any former affection of the nails will in all probability have disappeared.

ANALYSIS OF THIRTY-THREE CASES OF HEMORRHAGIC MALARIAL FEVER,

WITH SPECIAL REFERENCE TO THE USE OF QUININE IN THIS DISEASE.

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IN THE MEDICAL NEWS of July 21, 1883, my friend and colaborer, Dr. E. D. McDaniel, gives a "Condensed Tabular Report of Twenty-four Cases of Hemorrhagic Malarial Fever," the salient point of which seems to be to show the danger of the use of quinine in this disease. Believing, as I do, that the lives of those suffering from hemorrhagic malarial fever depend to a great degree upon the judicious use of quinine, here, as in all other malarial fevers, I am unwilling to let the inferences attempted to be set out by this report go unchallenged; and more so as the inferences are supplemented by such expressions as "here lies . . . the true reason why quinine is so dangerous and so uncertain a remedy;" "some of the cases in the table which died *with quinine* might possibly have lived without it, for they seemed to be doing well until a dose of quinine, given with the intent of aiding their condition, seemed to have the contrary effect, and to determine an unfavorable result."

Table I.

		Sex.		Result.		Quinine.		Recov'd.		Died.	
Cases.	Approximate Age.	Male.	Female.	Recovered.	Died.	Taken.	Not taken.	With quinine.	Without quin'e.	With quinine.	Without quin'e.
1	40	1			1	1[1]				1	
2	18		1	1		1		1			
3	6		1	1		1		1			
4	25	1		1		1		1			
5	18	1		1		1		1			
6	19	1		1		1		1			
7	20	1		1		1		1			
8	29		1	1		1		1			
9	12		1		1	1[2]			None.	1	
10	18	1		1		1		1			
11	13	1		1		1		1			
12	16	1		1		1		1			
13	17	1		1		1		1			
14	18	1		1		1		1			
15	18	1		1		1		1			
16	20		1	1		1		1			
17	15	1		1		1		1			
18	17	1		1		1		1			
19	27	1		1		1		1			
20	14	1		1		1		1			
21	15	1		1		1		1			
22	25	1		1		1		1			
23	27	1		1		1		1			
24	40	1			1		1				1

These two sentences show plainly the object of the tabular report. Without in any way entering into details of treatment, I submit the subjoined analysis of thirty-three cases of the same disease occurring in my practice from 1867 to 1874. I will follow the outline of Dr. McDaniel in giving the tabular statement.

Remarks.—These twenty-four cases were all typical cases of hemorrhagic malarial fever; they were all the cases treated by me during this time. Case No. 1 was some distance in the country. I did not see him until in the second paroxysm, and his stomach was in such condition that I was unable to give him quinine with any degree of success. I do think he was ever under its influence. At this time I had not resorted to its hypodermic use in these cases. Case No. 9 was of a most malignant type. The stomach would not retain quinine. Delirium developed in the first paroxysm, and the patient died comatose, without reaction from the second paroxysm. Case No. 24, a medical friend, was impressed with the idea that quinine was not required in these cases. At his request, and under protest, I treated him *without quinine*. The treatment was such as indicated by Dr. McDaniel and others who do not like quinine in this disease. The case was not seemingly severe, and lingered for several days. I have ever regretted that I consented, even at his own request, to treat the case without quinine.

In the twenty-four cases there were three deaths and twenty-one recoveries, or 87.5 per cent. recoveries, and 12.5 per cent. of deaths. Of these deaths, one (No. 24) was *without* the use of quinine, another (No. 1) with its unfavorable use, and the third (No. 9) was so malignant that probably no treatment would have been more successful.

In the twenty-three cases treated *with quinine*, there were two deaths, or 8.6 per cent., with twenty-one recoveries, or 91.4 per cent.

The character of the two cases resulting in death has already been given.

The one case treated without quinine died, or 100 per cent.

Table II.

		Sex.		Result.		Recovered.		Died.	
Cases.	Approximate Age.	Male.	Female.	Recovered.	Died.	With quinine.	Without quin'e.	With quinine.	Without quin'e.
1	50		1		1				1
2	28		1		1				1
3	55	1			1				1
4	50	1			1				1
5	20	1			1				1
6	30	1			1				1
7	14		1	1		1			
8	40	1			1			1	
9	15	1		1		1			

Besides these twenty-four cases, I saw in consultation during the same time nine cases. As is generally known, cases seen in consultation are regarded as alarming from the outset, or they have already been under unsuccessful treatment until they assume an alarming aspect. Hence, in pernicious forms of fever of a malarial type, seen in consultation, we should naturally expect a high rate of mortality. It is hardly fair, then, to judge of the results of any plan of treatment by cases seen in consultation, and hence I have deemed it necessary to append remarks on these cases, showing why I have placed them *practically without quinine*.

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[1] Very sparingly.

[2] Unable to retain quinine; died, without reaction, in second paroxysm.

Remarks.—It will be seen from an inspection of this table that the two recoveries were under the use of quinine. In one of these cases (No. 7), spirits of turpentine had been used in conjunction with the quinine; in the other (No. 9), the hæmaturia seemed to be much increased on first giving the quinine; but the next paroxysm was arrested, and with the cessation of the fever the hæmaturia also ceased, and the patient soon convalesced; and here, I may remark, seems to be the basis of the fear of quinine in these cases. Quinine will undoubtedly, in a certain number of these cases, increase the hæmaturia, and sometimes even seems to cause it. Seeing this, the timid administrator stops his quinine, and his patient dies, with the quinine under the ban of killing him; whereas, with a bolder hand, directed by a proper idea of the true cause of this *symptom* (a disturbance of the vaso-motor system under malarial influences), he would have unhesitatingly continued it, and his patient might have had a good chance to live. Remove the cause of the disease, and the hæmaturia will cease. I have seen quite a number of cases to which this remark applies; some, in which the quinine, given at the expiration of the second hebdominal period as a prophylactic measure (a measure familiar to all physicians in malarial districts), caused a return of a decided hæmaturia, without fever. In these cases I have not hesitated to repeat the quinine the next day, with the best results. Here the timid hand, not appreciating the true nature of the disease, and led from the true point of attack by the *symptom* of hæmaturia, falters, and his patient suffers the result. No. 8—here we have one death *with quinine*. This is not to be wondered at. In all forms of pernicious malarial fever (and this may be ranked among the worst), we may expect deaths under any plan of treatment, and whoever is so unfortunate as to meet with a number of these cases must be prepared for its victims.

The remaining six cases died *practically without quinine*. No. 1, an old lady treated in 1867, when calomel was much relied on, died of exhaustion, without ever having been well under its influence, her physician waiting for the fever to abate under the use of calomel, febrifuges, and baths, before commencing the quinine. No. 2, a most malignant case, died in the first paroxysm, without reaction from the depression of the initial chill. No. 3, an intemperate man, also died during the first hæmaturic paroxysm, and before I reached him as consulting physician. No. 4, a very malignant case, in which the patient refused his quinine, and died in a state of delirium in forty-eight hours. No. 5 got no quinine until seen by me on third day of attack, and died that night. No. 6, a railroad employé, without any of the surroundings necessary to successful treatment, and not seen by his physician until too late to do any good by any course of treatment; seen by me just before death. No. 8 died, under the use of quinine, with suppression of urine. Nos. 7 and 9 recovered, as already stated, with quinine.

So far, then, as these thirty-three cases go, quinine is shown to be not a *very dangerous*, or even *uncertain*, remedy. In the twenty-three cases where it had a fair trial, we have 91.4 per cent. of recoveries, and only 8.6 per cent of deaths, a rate of mortality which is not excessive in a pernicious fever; and in the two cases which make up the 8.6 per cent. of deaths, there were extenuating circumstances.

The death-rate, which is high, in the nine cases seen in consultation has been already explained, so as to show that it is, at least, *not due to the use of quinine*.

But I am reminded that figures, which are said "never to lie," contradict each other in the tables of Dr. McDaniel and those introduced in this article. Very true, an unfortunate fact it is that these unerring digits are so easily made to reflect, to some extent, the mind of him who uses them. The *environments* and the *method* of giving the quinine in the ten fatal cases in the two tables of Dr. McDaniel are not given, and how much of this result is due to these, and not to the quinine, cannot be known without them.

The positive result of six recoveries in the six cases *treated without quinine* is of more value; but, while it teaches us that cases may and do recover under this plan of treatment, it does not follow that other plans are necessarily wrong. Notably, among other plans of treatment claimed to be successful, is the use of atropia hypodermically, by Dr. W. C. Jackson, of Montgomery. He says, "I use no other remedy to counteract this condition, and relying solely and entirely upon this Sampson, it has never failed me." Believing, with Dr. Jackson, that atropia acts powerfully upon the vaso-motor system, I should feel disposed to supplement the quinine by atropia; but it will require a much wider field of observation than the few cases treated by Dr. McDaniel *without quinine*, and by Dr. Jackson *with atropia alone*, before we may feel justified in discarding quinine in this disease, which is confessedly malarial and paroxysmal.

ACUPRESSURE FORCEPS:

AN INSTRUMENT FOR THE INSTANTANEOUS ARREST OF HEMORRHAGE DURING SURGICAL OPERATIONS.

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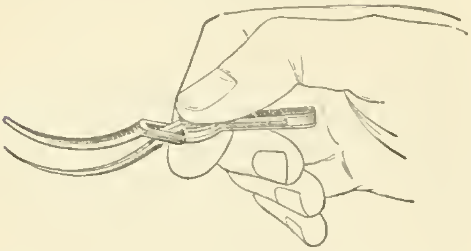
Under this heading, I wish to introduce an instrument to the medical profession that I have devised for the arrest of hemorrhage. It consists of two blades, Fig. 1, under the command of a spring, the lower of which is a needle, and designed to transfix bleeding tissues, which done, the grasp of the hand is released, and compression is instantly effected between the blunt blade which lies upon the surface of the bleeding vessels and the needle which lies beneath them.

FIG. 1.

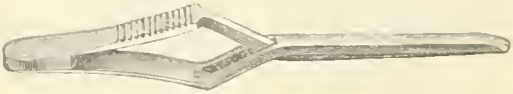


Its special application is where hemorrhage takes place simultaneously from many bleeding vessels. Few surgeons have not felt the need of a certain and instantaneous hæmostatic in operations in which the tourniquet cannot be used, or after the tourniquet has been removed. In the latter case, though the main vessels have been ligated, the hemorrhage is often so great from numerous small bleeding points, and the usual means of arrest and ligation so tardy, that fatal collapse has not infrequently resulted.

It is for this class of cases that the acupressure forceps have been devised. Beneath a bleeding area the needle is thrust, and the spring, instantly denoting that the hemorrhage has been arrested, leaves the operator to turn his attention to another point of danger. Thus half a dozen instruments will be found as efficient and much more transparent than a corps of assistants—not getting in the operator's way, and maintaining a silent but effective grip until the ligature may be applied, and the instruments one by one removed. In the surgical clinics of medical colleges, in hospitals, in active military service, and in the private practice of those surgeons who cannot command adequate assistance, this instrument will, I believe, be found of great service.

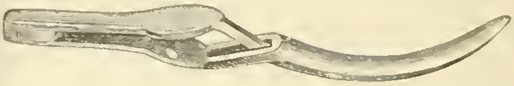
As acupressure forceps, they often render the ligature unnecessary, for no oozing will follow their removal if the vessels are small, and their application has continued for several minutes. In operating upon the female perineum, in which the ligature is to be avoided, this instrument especially (No. 2) will do excellent work.

FIG. 2.



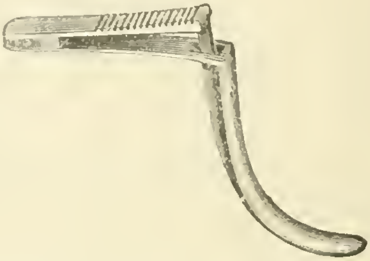
Four varieties and nine sizes are made. One, in which both blades are needles—a suggestion of Dr. Keen, is not represented by a cut. All the diagrams are full size. Nos. 2 and 3 will be found most generally useful. No. 2 or a larger size will be found effectual in deep wounds, as in lithotomy. For plastic operations upon the face, a small size is made (Fig. 1). There are three sizes of No. 2, and three of No. 3—the largest of which is fully eight inches long.

FIG. 3.



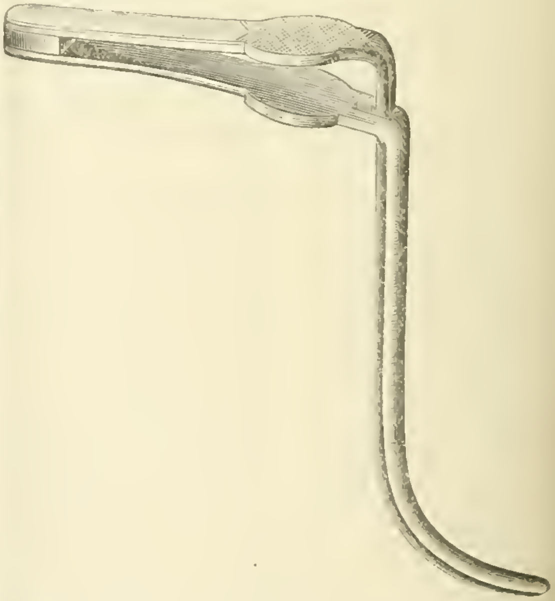
Although each instrument may be used not only as a hæmostatic, but also as a tenaculum, yet the two designed especially as tenacula are represented in 4 and 5. For this purpose, I have found the large size (Fig. 5) to work admirably. In using the instruments, a quick, firm thrust is necessary, but this manœuvre can easily be acquired on the coatsleeve.

FIG. 4.



My preference (if I could have but one variety) is for No. 2. Were I ordering a dozen, I should take three of No. 2, three of No. 3—two of each a size larger, one of No. 5, and one of mammoth No. 3. No. 5 is not necessary if an ordinary tenaculum is at hand, but I believe that those having No. 5 will set the old tenaculum aside.

FIG. 5.



I have given these instruments a satisfactory trial in the Jefferson Medical College clinic and hospital and in the Presbyterian Hospital, and feel that they have a useful future before them.

They have been made with great care by Mr. E. A. Yarnall, 115 South Tenth Street, of this city, who has spared no pains to make them perfect in every respect.

Philadelphia, 1604 Spruce Street.

HOSPITAL NOTES.

AN AFTERNOON IN THE OUT-PATIENT ROOM, MIDDLESEX HOSPITAL, LONDON.

Service of A. PEARCE GOULD, F.R.C.S. Eng.,
ASSISTANT SURGEON TO THE HOSPITAL.

INGROWING TOENAIL.

This young woman, gentlemen, tells us she has a sore great toe from wearing tight boots, and you now see she has what is wrongly called an "ingrowing nail." It is not the nail that is at fault, but the skin on the side of the nail has been pushed over the nail until a foul ulcer has been produced. It is very generally seen on the outer side of the nail; but, you remember, lately we had a case occurring on the inner side. You have seen me remove a portion of the nail in many cases; but this case, which is not very severe, we shall probably be able to cure by stuffing a piece of lint carefully under the nail, so as to raise it, and at the same time push aside the overgrowing flesh. She must also wear square-toed boots.

LACTEAL CALCULUS.

This woman is a nursing mother. The left breast is soft, normal in all respects, with an excellent nipple. The right mamma is about four times as large, with distended veins coursing over it; it is firm, heavy, but the skin is still pale. The areola, too, is full, and as I compress the breast gently, you can see the individual "sacculi," or dilatations of the galactophorous ducts, swelling under the thin skin of the areola, and at the same time some milk flows from the nipple. She tells us that she was quite well till three days ago, since when she has not been able to suckle with that breast, owing to its causing pain, and the breast has been steadily swelling ever since. She has shooting and hot pains in the breast from time to time. It is an excellent example of *milk congestion* of the whole mamma, the same condition which usually precedes a lacteal abscess of an individual lobe, and if left unrelieved in this case might run on to suppuration of the entire gland. Let us find the cause. The nipple is a typically good one; there is no "crack" in it; but at its summit is what looks like a small pustule, and is very tender. I open that with a knife, and, instead of pus, a small, solid, oval body, a *lacteal calculus*, escapes. This has obstructed the outlet of one of the ducts, the swelling around has obstructed others, and the pain in the act of suckling has prevented her relieving the remaining lobes, but all the while secretion has been actively going on, and from time to time specially stimulated by the nursing at the other breast. A little bathing of the nipple with hot water completes the surgical treatment, and all that is wanted now is to put the child to this breast alone for the next one to three times that she nurses.

SUPRAMAMMARY ABSCESS.

Here is quite a different case. This young girl is seventeen years old, and has menstruated regularly for two years, the last time three weeks ago. The outer side of the left areola is swollen and reddish in color; skin is shiny and œdematous, and there is superficial fluctuation. The mamma itself is unaffected. In the left axilla are two enlarged tender glands. This then is an areolar or supramammary abscess, a form often seen at, and soon after, puberty, and apparently associated in many cases with the active development of the part at that time. This patient traces the mischief to a blow. The house surgeon will open the abscess by an incision radiating from the nipple to avoid the ducts, and she will speedily be well. Remember the enlarged glands; they are always found in mammary abscess.

PHLEBOLITH.

This woman tells us that in April last she had a "gumma" behind the knee, which was treated by painting it with iodine. It left only a little lump behind. A few days ago she stumbled, and since then has felt pain in the part, and she wants to know if her trouble is returning. Feel the part. You will notice a hard narrow body, about two and a half inches long, a little tortuous in outline, and about the size of a small crow-quill, freely movable laterally, placed across the tendon of the semitendinosus muscle, just above the knee; trace it up, and you will notice a dilated vein just above. Clearly, then, she had a thrombus in a dilated vein in April. This thrombus has organized, and then become calcareous, and now forms what is called a phlebolith. In its organization it has contracted, and now moves freely in the bed which the previously enlarged vein had made for itself. It calls for no treatment; it is a permanent possession of the woman. We will simply tell her so, and advise her to rest the leg if at any time it pains her. The so-called "gumma," then, in this case, was what goes by the name of "phlebitis."

TWO CASES OF HUNTERIAN CHANCRE ON THE LIP.

Look well at these two women. Here is a chaste woman, thirty years of age, who all her life has been subject to a crack in the middle of the lower lip; two months ago the edges of the crack began to swell. She has now a distinct induration of the middle of the lip, with slight abrasion of the mucous surface. Under the jaw you will find a number of hard, enlarged, freely movable, and quite isolated lymphatic glands. Just below the occiput are two similar glands. On the left tonsil is a small superficial ulcer, and over the body are two or three small dusky papules.

The other patient is a woman of the town, who, six weeks ago, was under our treatment for gonorrhæal rheumatism of the right knee. Four weeks ago she came with a sore on the upper lip, just to the right of the middle line; its surface looked aphthous, but there was no other spot like it, and the base was a little hard. The induration increased, and is now very marked, while the surface has cleared, and is merely abraded. She has enlarged glands under the jaw, like the last patient, and all over the trunk she has an abundant eruption, which first came out three days ago. She says she has no sore throat; but there is a superficial, ragged, gray ulcer occupying half the free surface of the left tonsil. They are both taking mercury in pill—at first four grains of blue pill a day, then six grains. We will now increase the dose to eight grains. For the throat ulceration we will prescribe a bicyanide of mercury gargle, ½ gr.-℥j, and a little white precipitate ointment for the surface of the chancres. The prognosis depends chiefly upon the faithfulness and perseverance with which they will carry out the treatment, which will consist in a long course of mercury, at no time severe enough to do more than just touch the gums. Of course, we warn them against infecting others by kissing, or the common use of spoons, etc.

NÆVUS OF SCALP.

Here are two infants brought to show us the result of treatment. This one had a subcutaneous nævus on the forehead just in front of the hair. I treated it by constant pressure, and to secure that I applied, as you have often seen me do, *contractile* collodion, painting it on layer over layer twice a day; in this way very firm pressure has been kept up for some weeks. You see the result, the collodion scab has been off a month; the nævus is quite cured and there is no scar nor any other indication of the late presence of the vascular growth. This little body had a capillary nævus over the parietal bone, and I burnt it with a fine-pointed cautery in four places. The growth is quite stopped, and the few capillaries which are not cured may be left, probably they will undergo a slow process of obliteration; if not, we can treat them in a similar manner later on. Now we will call in some male patients.

HYDROCELE OF TUNICA VAGINALIS.

This young man, aged twenty-four, makes the diagnosis for us, for he tells us that two years ago a swelling in the scrotum was tapped and fluid was drawn off. The swelling has gradually reappeared. We see the tumor is limited to the scrotum, as you grasp the upper part of the scrotum there is nothing but the cord between the finger and thumb; the swelling fluctuates, is dimly translucent, and the testicle is embedded in it, though it can be felt at the lower and back part of it. Notice his age; we must not be content with tapping the hydrocele; we must endeavor to obtain a radical cure, and for this purpose we will, after tapping, inject some pure carbolic acid.

HYDROCELE OF CORD: OMENTAL HERNIA.

This lad is seventeen years old. At first sight this case resembles the last, but examine it carefully. There is a tumor filling the left side of the scrotum, fluctuating, clearly translucent in all its parts, with a slight impulse on coughing when he stands up—none on lying down. Further, the testicle is not enveloped in the swelling, but is quite at the bottom of the scrotum below the hydrocele, and gliding freely over it. The cord too is very much thickened and indurated. The fluid is evidently contained in the unobliterated funicular sheath of peritoneum, and in such cases there is often a fine communication with the peritoneal cavity, so we will lay him down and try whether the tumor is reducible by long-continued compression. No, it is not. I will now tap it. You see I have drawn off several ounces of the ordinary straw-colored hydrocele fluid. But notice that what we took to be a thickened cord is now felt to be an irreducible omental hernia; and now we see the explanation of the curious symptoms. The cyst pushed up the omentum and fixed it in the inguinal canal and just outside the ring, here it felt like a thickened cord, and when the man coughed the impulse in the hernia was transmitted to the hydrocele.

EPITHELIOMA OF TONGUE.

This man is forty years old, and comes to us complaining of a sore tongue which he has noticed for two months, and which pains him very much on eating. He is a plumber by trade, says he has enjoyed perfect health, denies ever having had any venereal disease, and by cross-questioning, you see that I do not obtain any evidence of his having had constitutional syphilis. About midway along the right edge of the tongue is a small depressed, irregular ulcer, with raised, uneven, and hard edges; the rest of the tongue is perfectly healthy; no enlarged glands beneath the jaw; teeth not jagged. Here the diagnosis plainly rests between a late syphilitic ulcer and epithelioma, because the tongue is otherwise quite healthy, shows no signs of old fissures or papules, and because there is no history of syphilis: also, because the ulcer is very irregular, has indurated edges and base. I believe it to be epitheliomatous. The man's age and the position of the sore harmonize with this view. Notice, that while the quite healthy condition of the rest of the tongue supports this opinion, had we found the tongue in an ichthyotic condition, that also would have favored the diagnosis of cancer. We will, however, give him 30 grs. of iodide of potassium a day for a week. If it fail to have any effect, we will take the man into the hospital and excise one-half of the tongue. The method I should adopt in such a case would be to split the tongue along the middle line and cut out the one half quite far back with scissors, picking up the arteries as they are divided.

ABSCESS OF LOBULE OF EAR.

This young fellow tells us that for many years he has had a small "core" in the lobule of the right ear; it has given him no trouble till three days ago, when it rapidly swelled. Now, you see, he has a lump the size of a cherry projecting from the back of the lobule; it is soft and fluctuating. The diagnosis rests between hæmatoma and abscess. A grooved needle settles the point, for pus flows along the groove, and I will now open the abscess freely. Here, then, we may say that we have an example of what Sir James Paget has called "residual abscesses," that is, an abscess set up around (possibly in part by) a residue or remnant of some long-past inflammation.

SEBACEOUS AND DERMOID CYSTS OF SCALP.

This middle-aged man came last week with a common sebaceous cyst on the scalp. You remember that I transfixed it, and tore out the thin cyst-wall, and, after all bleeding had stopped, I painted the edges over with iodoform, dissolved in collodion, 10 per cent. The little wound is now nearly healed. In this case, the sac consisted of a distended sebaceous gland, fibrous tissue, lined by squamous epithelium, and the contents were only inspissated sebum. Now look at this young man who wants advice about a tumor just behind his left ear, which has been there as long as he can remember, and in exactly its present state. It gives him no trouble; it fluctuates, and at first sight it resembles that in the other man; but notice that the skin moves freely over the tumor, and further that a rim of bone is felt around the base of the tumor—two important differences. Here we have a congenital or dermoid cyst of the scalp. It is caused by an infolding of a portion of the epiblast of the embryo; it lies *under* the scalp, not *in* it; the sac consists of true skin, with all its special structures—hairs, glands, muscles—and its contents are *all the excreta* of the skin—hairs, epidermis, sweat, sebum. These are most often met with near the orbit. We will not treat it, as it is not causing any inconvenience. The only treatment justifiable would be complete excision of the cyst, and you must be very careful, indeed, to remove every portion of the sac. As a rule, such dermoid cysts merely rest upon the bone; occasionally the bone is depressed beneath them, and, as a still more unusual condition, the bone is actually perforated here, and thus, when you remove the tumor, you actually open the cranial cavity. Now, in this particular case, we can feel a bony rim around the tumor; so the bone is evidently hollowed out; but there is no evidence (pulsation, etc.) of perforation of the skull.

ANAL ABSCESS.

This man says he has "piles." Let us look. At a glance you see he has not "piles." Here is a superficial swelling behind the anus, reaching just over on to the coccyx, fluctuating and painful. You see I can press my finger into each ischio-rectal fossa without causing any pain or meeting with any resistance. This then is an anal abscess, the pus is just under the skin at the verge of the anus and *not* in the ischio-rectal fossa. If left to itself it will form a fistula. We will try to prevent that by making a free incision into it. Abscesses like this are the common starting-point of fistula in ano. Such fistulæ are superficial to the sphincter muscle, and in slitting them up the muscle is not cut.

MEDICAL PROGRESS.

Œdema of the Ary-epiglottic Folds, especially in Chronic Laryngeal Affections.—M. Gougenheim draws the following conclusions at the close of a memoir on this subject: 1. Œdema of the ary-epiglottic folds, especially in chronic laryngeal affections, is not always accompanied by dyspnœa. 2. When dysphagia is absent, which is rarely the case, the œdema may be latent, and is only revealed by laryngoscopic examination. 3. On laryngoscopic examination the œdematous or hypertrophied folds do not touch during the respiratory act. 4. When the patient is told to articulate the tumefied folds approach each other, but do not cause dyspnœa, and dyspnœa is only caused when the act is prolonged. 5. When the folds are very much enlarged and in contact, they are more or less completely immovable and inspiration does not cause dyspnœa, though articulation and prolonged examination produce spasm and dyspnœa very rapidly. 6. In the course of a very pronounced case of œdema of the folds, laryngoscopic examination made at the time of an attack of suffocation enabled him to see that, so far from the folds approaching each other at the moment of inspiration, they separated, though very slightly. The suffocative feeling and dyspnœa were not, then, the result of an approach of the folds to each other, but of a spasm of the cords, probably induced to some degree by the prolonged examination. 7. Sestier's theory, therefore, of these cases of dyspnœa is inexact. 8. The attacks of suffocation and the inspiratory whistling are due, in these cases, only to an intercurrent spasm, either of reflex origin or produced by compression of the recurrent laryngeal nerves. 9. The discovery of ary-epiglottic swellings is not a therapeutic indication for tracheotomy, unless there is dyspnœa. 10. It is necessary, in any therapeutic procedure, to touch the tumefied folds only with the greatest circumspection, lest a severe spasm be produced. 11. The spasm is not always, in these cases, an absolute indication for tracheotomy; Gougenheim has seen it disappear rapidly in some cases under the use of external and internal remedies. 12. When one sees the signs of laryngeal suffocation, which physicians almost always attribute to an œdema of the folds, a laryngoscopic examination should be made, if possible, as it may reveal the existence of subglottic lesions which may influence the mode of treatment.—*Gaz. Méd. de Paris*, July 14, 1883.

New Method for Determining the Percentage of Fat in Milk.—At the meeting of the Boston Society for Medical Observation on May 7th, Dr. Harrington read a paper on this subject. Attention was called to the Feser lactoscope, a small instrument designed to determine rapidly the percentage of fat in milk, and on account of its great simplicity peculiarly adapted for domestic use. The principle of the instrument depends on the fact that the more fat there is in the milk the more opaque the fluid becomes. The instrument consists of a cylinder of glass, into the end of which is fitted a stopper carrying a small rod of white glass on which some black lines are marked. A small quantity of milk (four c.c.) is now poured into the upper end of the cylinder, and water is added in small quantities until the black lines can be seen on the glass rod; the contents of the cylinder are shaken from time to time as the water is added in order to mix it thoroughly with the milk, and when the black lines can be seen the percentage of fat can be read off at once from a scale on the side of the cylinder at the level of the diluted milk. Dr. Harrington stated that he had made a number of comparative tests between this instrument and other methods, and had found that it gave very satisfactory results.

The reader said that good milk should have from two and one-half to three per cent. of fat. Some analyses of human milk have been recently published in which the results of different observers have been tabulated. From this it appears that the average percentage of fat in human milk is about two and one-half per cent., but the analyses vary so much that the results of any one man can hardly be taken as reliable.

Dr. Haven said that he had used the Feser's instrument at the West End Nursery with very satisfactory results. It shows a very great variation between different cans of milk as supplied by the same milkman, the variation being from two and one-fourth to four and one-half per cent. of fat, and he had found it much better to have the milkman mix the contents of all the cans together before bringing them to the city rather than to try to get the supply from any one cow, for in this way the percentage of fat would be the same in the milk supplied to all the children, and much more accurate observations could be made on the comparative results of feeding than where the variation between the milk for the different children was so great as under the plan of separate cans. Where the percentage is reduced below the normal it is likely to be a source of inanition, but where the fat is unduly increased it gives rise to intestinal trouble on account of a lack of the proper amount of pancreatic juice to properly digest it. It was not thought that the coloring matters used to doctor milk would interfere with the use of this instrument, for although they might affect the color of the milk they would not change its opacity to any very great extent.—*Boston Med. and Surg. Journal*, August 16, 1883.

Faradization of the Abdomen in Ascites.—In the Russian literature of the past three years, several cases have been recorded in which ascites was successfully treated by faradization of the abdomen. Skibnewski has recently reported two additional cases; the first, a little girl, æt. 9, very anæmic and with marked ascites. The urine was small, with no albumen, lungs sound, heart-beat normal, with a feeble systolic souffle. For ten days the patient took digitalis and iron without any diuretic effect, and during these ten days the circumference of the abdomen sensibly increased. The digitalis was then discontinued, the iron being kept up, and Skibnewski commenced faradization of the abdominal muscles two or three times a day. Each *séance* lasted fifteen or twenty minutes. The currents were sufficiently strong to produce muscular contraction. During the same *séance* each muscle was made to contract fifteen or twenty times. After twelve days the circumference of the abdomen was reduced from 36½ inches to 30; the quantity of urine was considerably increased. After three weeks the circumference of the abdomen was only 24 inches, and the quantity of urine normal. A month and a half after leaving the hospital, the patient had a return of the ascites. As before, medication had practically no effect, and faradization was resorted to, with the former effect.

The second case was that of a young man, æt. 17.

Ascites and augmentation of the spleen commenced after an infectious disease. The urine was small, and contained no albumen. Faradization was performed twice a day for fifteen days, and then thrice a day until, within four weeks, a cure was effected, both of the ascites and splenic enlargement.—*Revue des Sc. Méd.*, July, 1883.

Glycerine in Acute Fevers.—Semmola recommends the following drink in acute fevers: Glycerine f℥j; citric or tartaric acid grs. xxx; water Oj. From fʒv to f℥j should be taken every hour. Glycerine is useful as a combustible aliment and serves to prevent the waste of the body. With this scope it is more convenient than alcohol, which is to be feared from its exciting action on the brain.—*London Medical Record*, July 15, 1883.

Nephrectomy.—The first nephrectomy in Naples and the fifth in Italy, has been performed by D'Antona, for pyonephrosis, the lumbar incision being used. He first resected nearly two inches of the eleventh rib and carried his incision down just in front of the twelfth rib. By this measure he obtained more room for his hand. No sutures were used, but the wound was left to heal by granulation. The result was favorable.—*Centralbl. f. Chirurg.*, No. 31, 1883 (from *Riv. Clin. dell Univ. di Napoli*, No. 1, 1883).

Molluscum Contagiosum Giganteum.—Under this name Dr. S. Laache, of the Anatomico-Pathological Institute of Christiana, describes, in a recent number of the *Nordiskt Mediciniskt Arkiv*, a tumor extirpated from the nape of the neck of a female aged fifty-six. This tumor, which had lasted for thirty years, but had increased considerably for the last four years, was of the size of the fist, with nodulations or unequal protuberances on the surface; it was covered at its base with normal skin, sending tongue-like ramifications over the whole tumor, and which were transformed at last into a delicate membrane, half pellicular and half granular, covering the whole mass, except at the summit, where there was a flat, crateriform depression. Under this incomplete covering there was the mass of the tumor, which, as it were, undulated against the surface. The cut surface, equally composed of nuclei of unequal size, separated by septa of cellular tissue, presented a granular aspect, but without the knife being covered with adipose matters. Examined by the microscope, the lobules contained, in the circumference, cellules evidently resembling epidermis, while in the centre was seen a considerable quantity of corpuscles with an adipose or waxy lustre strongly resembling amyloid tissue. In all other respects they resembled the corpuscles of molluscum, with which the author compared them. In his remarks on the case, Dr. Laache discusses the differential diagnosis between molluscum and epithelioma or cancroid, to which last the tumor was at first referred. From cancroid, however, the molluscum in question was distinguished by its definite form and its tendency to grow outward, besides by its being covered entirely by a kind of delicate skin without any apparent ulceration. It was, however, the presence in considerable quantity of corpuscles of molluscum which determined the diagnosis. The author admits, however, that, as regards prognosis, the tumor could not be regarded as being so benignant as ordinary molluscum, and he therefore thinks he ought to consider it as a transitional form between the malignant epithelial tumor and the benignant one. He observes that there was no relapse at the end of more than six months. In conclusion, Dr. Laache considers the presence of nuclei in several of the shining corpuscles as a proof in favor of the opinion that the corpuscles of molluscum are the results of a peculiar degeneration of preëxistent epidermic cellules.—*Med. Times and Gaz.*, Aug. 11, 1883.

Hydrobromate of Quinine.—Dr. Garcia, of Brazil, states that malarial fever is promptly arrested by the hypodermatic injection of grs. iij of hydrobromate of quinine. This remedy possesses the advantage of causing no inflammation or nodules after subcutaneous injection.—*L'Indipendente*, July 25, 1883.

Physiological Action of Coffee.—In the course of some recent experiments on this subject, Dr. J. A. Fort, of Rio de Janerio, tested the action of coffee by 1. Completely abstaining from it for fifteen days; 2. Taking excessively large quantities for fifteen days; and 3. Taking two cups a day for twenty-five days. He concludes that coffee acts on the organs and functions by exciting the cerebro-spinal and central nervous system. Taken in very large doses, it produces insomnia by excitation of the brain. By exciting the cord, it produces muscular cramps, pains in the stomach, intestinal and cardiac troubles. The excitation which it produces in the cord is, consequently, one of a reflex or excito-motor kind. It may be such that it equally affects the nerve-roots of the sympathetic and those of the spinal nerves. It is well known that a slight excitation of the sympathetic affects the vaso-motor nerves; but if this excitation is very strong, the irritation of the vaso-motor nerves causes paralysis of them. Dr. Fort asks if this phenomenon does not explain the troubles of intestinal secretion, and the genital troubles produced by the ingestion of large quantities of coffee. Taken in moderate quantities, coffee produces a less excitation in the nervous system. It slightly stimulates the brain, causing less inclination to sleep, and increased activity of the brain. It also slightly stimulates the spinal cord, giving it tone, and slightly increasing the activity of its various functions. It is true that coffee increases tissue waste, but only by its action on the nervous system, and it causes neither a greater nor less consumption of nitrogenous food. In therapeutics, therefore, it should be classed among the reflex excitors, and not among the agents modifying nutrition.—*Bull. Gén. de Thérap.*, June 30, 1883.

Laparotomy for Tumors of the Fallopian Tubes.—Dr. A. Martin reports eight cases of laparotomy for tumors of the Fallopian tubes. Of these, five were cases of hydrosalpinx, two of which were double, pyosalpinx in two cases; and one case of double hæmatosalpinx. In arriving at the diagnosis in the cases, Martin anæsthetized the patients, and examined both per vaginam and per rectum, and in some cases through the dilated urethra. Of the eight cases only one died, from sepsis in a case of double hydrosalpinx. The pelvic cavity was entered by a long incision in the linea alba.—*Centralbl. f. Chirurg.*, No. 24, 1883.

Treatment of Vascular Tumors Without Operation.—Floriani has recently treated six cases of telangiectasis with sublimate collodion (3:20). The collodion is put on in four layers by means of a camel's-hair brush, each layer being allowed to dry thoroughly before the next is applied. On the fourth day the edges are raised and a second series of four applications are made, this being repeated every fourth day until the swelling disappears and the edges are depressed. After the crust falls off the place seems depressed and reddened, but soon resumes its normal color. This treatment is painless and requires only one or two months to cause an angiomatous tumor to disappear.—*Allgem. Wein. med. Zeit.*, No. 32, 1883.

Chloride of Lead as a Disinfectant.—Chloride of lead is now proposed as a disinfectant. It was suggested by Dr. Goolden many years ago. Half a drachm of nitrate of lead is dissolved in a little hot water and mixed with a slight excess, say two drachms, of common salt in a pail of water. The clear liquid, consisting, of course, of chloride of lead, is no doubt, an excellent disinfectant, but we do not see that it is better in any respect than chloride of zinc, which is very much cheaper. These metallic disinfectants have the advantage of being powerful deodorizers as well as germ-killers. Each will absorb sulphuretted hydrogen and ammonia, to take two typical gases, and yet neither has any smell of its own. Carbolic acid, a most valuable antiseptic, does not destroy, but only masks foul smells and leaves its own disagreeable and persistent odor in addition. Lead salts, besides being expensive, are blackened by sulphuretted hydrogen, which is a disadvantage. The only objections to chloride of zinc are that, being non-volatile, it does not purify air, and that having no odor there is constant danger of its being taken internally by mistake. This objection applies, of course, equally to chloride of lead.—*Lancet*, August 11, 1883.

Variation and Disappearance of Cardiac Murmurs.—Mr. E. Hyla Greves says, in a recent paper in the *Liverpool Medico-Chirurgical Journal*, July, 1883, that it is a matter of daily observation that certain cardiac murmurs dependent on definite organic lesions change and vary, and by no means infrequently disappear, the lesion still remaining.

There have been several cases in the Royal Infirmary during the past winter illustrating the fact, that not only may murmurs due to incurable cardiac diseases vary and even disappear, but a fact also equally important, viz., that many murmurs, apparently due to an incurable lesion, may actually depend upon lesions which are perfectly curable, and in which, therefore, the murmur may not only disappear, but also the condition of the heart which gave rise to it, and the heart itself again become perfectly normal.

It is now an undisputed fact that, even after a considerable degree of regurgitation, either through the mitral or tricuspid valves, complete restoration to the normal condition of these valves may actually take place; and the same may be affirmed, but to a much more limited extent, of the aortic valve, for the physical conditions present at this orifice naturally offer insurmountable difficulties to the process of restoration. Whether this restoration to the normal condition becomes permanent or not depends upon a variety of circumstances, more especially on the original cause of the lesion, the age, occupation, and mode of life of the patient, and in forming a prognosis these factors must be carefully borne in mind. There is a general consensus of opinion that in cases of anæmia, chlorosis, etc., as well as in general febrile conditions, there are muscular relaxation and general debility, and it is argued with great probability that the muscular substance of the heart is affected in a like manner, for after death in these cases it has been found flabby and relaxed, and in well-marked cases of chlorosis, even dilated (from loss of its elasticity), and somewhat hypertrophied. And it is probable that the so-called functional or hæmic murmurs so constantly heard in chlorosis, etc., are due not merely to the spanæmic condition of the blood, as was formerly taught, but to actual regurgitation, brought about by the relaxed and dilated condition of the heart itself, due to malnutrition. These cardiac hæmic murmurs are always systolic in rhythm, and their position of maximum intensity is about one inch and a half to the left of the pulmonary area, and in the same plane, *i. e.*, just over the position of the left auricular appendix. And, in connection with this fact, it is interesting to note that, as Skoda first observed, a mitral regurgitant murmur is occasionally heard only in this area. Naunyn attributes this to the better conduction of the murmur along the course of the regurgitating blood. This view is supported by Balfour and others. The fact, too, that the pulmonary second sound is accentuated in cases of chlorosis, indicates increased tension in the pulmonary artery, and is consequently another proof of the regurgitant origin of these hæmic murmurs. Now, inasmuch as this relaxed and dilated condition of the heart is a curable one, if not too far advanced, it follows that under appropriate treatment not only will the heart be restored to its natural condition, but also that the accompanying murmurs will disappear.

Mr. Greves gives the details of four cases in which murmurs had disappeared, and draws the following *résumé:*

Although murmurs are among the most constant of the physical signs of heart disease, still their presence does not necessarily indicate the existence of incurable lesions, nor their absence that such lesions are not present. In forming a correct diagnosis and prognosis of any case, therefore, too much reliance must not be placed on the presence or absence of murmurs, as is too frequently the case, but other signs and symptoms must receive careful examination and consideration, for often on them alone is it possible to found a correct diagnosis.

The presystolic murmur of mitral stenosis, the most typical of all murmurs, occasionally disappears, the lesion still remaining. Mitral regurgitant murmurs, when due to simple relaxation of the heart's muscle, and dilatation of its cavities and orifices, as in chlorosis and general febrile conditions, in most cases completely disappear under appropriate treatment.

Tricuspid regurgitation is occasionally a temporary condition, due to bronchitis, etc., and when the cause is removed, this condition is recovered from, as is indicated by the disappearance of the murmurs.

Aortic systolic murmurs, due to a permanent lesion at the aortic orifice, may undergo changes in their intensity, but never completely disappear.

Aortic diastolic murmurs in certain extremely rare cases have been known to disappear. In these cases a systolic aortic bruit is always present, which remains persistent, and thus indicates the existence of the lesion.

Pulmonary systolic murmurs are persistent when due to an organic lesion; but, if non-organic, may disappear temporarily or permanently.

Resection of the Wrist by Two Lateral Incisions.—M. Polaillon recently presented to the Société de Médecine, the resected bones from the wrist of a woman, æt 39, on account of a non-malignant tumor of the right wrist. The specimen consisted of the carpal bones, the extremities of the radius and ulna, and the upper extremity of all the metacarpals except the metacarpal of the thumb. The technique of the operation was as follows: After anæsthetizing the patient and applying the Esmarch bandage, he made two incisions along the radial and cubital side of the wrist. Through these openings the carpal bones, which were bathed in pus, were easily enucleated. Then about three-fifths of an inch of the lower end of the ulna were resected, and afterward the lower end of the radius was also resected. The upper extremities of the four metacarpal bones were denuded of articular cartilage, and found in a suppurating condition, and were resected with Liston's pincers for about four-tenths of an inch. All the tendons were carefully spared. The cavity was then rid of its fungosities by means of a blunt curette, and thoroughly washed with a twenty per cent. solution of carbolic acid. Metallic sutures were put in, with drainage-tubes and Lister dressing. The hand and forearm were immobilized. There was immediate union, except at one point in the radial incision, which remained fistulous for some time, and discharged small spiculæ of bone. Ten months after the operation M. Palaillon presented the patient to the Society. The hand is very useful, and its efficiency in performing various duties is improving rapidly.—*L'Union Méd.*, July 22, 1883.

PERCHLORIDE OF IRON IN SKIN DISEASES.—DR. CASARINI states that the external employment of chloride of iron is highly useful in many chronic diseases of the skin, employed as an ointment consisting of one, two, or three parts to thirty of lard, or as a lotion mixed with two or three parts of water. The diseases in which it is most efficacious are subacute and chronic psoriasis, eczematous lichen, and eczema—after all acute symptoms have subsided. From the cases he has employed it in he draws these conclusions: 1. The perchloride is a highly efficacious remedy in the treatment of simple and hemorrhagic purpura. 2. It is very useful in the chloro-anæmic condition which often accompanies certain skin diseases, such as rupia, ecthyma, and impetigo. 3. It is employed externally with promptly efficacious results for ulcers dependent on scrofula or constitutional syphilis. 4. Used as an ointment, it modifies in a most efficacious manner the squamous skin diseases, and especially psoriasis.—*Med. Times and Gaz.*, Aug. 11, 1883.

STATISTICS OF OPERATIONS FOR LYMPHOMATA COLLI.—G. KRISCH gives the results of ninety-two operations for tuberculous glands of the neck. Total number operated upon 92; complete recovery in 32 cases—35 per cent.; partial recovery in 44—48 per cent., of which there was recurrence in 22 cases—24 per cent., and general disease followed in 22 cases—24 per cent., $4\frac{1}{3}$ per cent. having phthisis. Sixteen patients or 17 per cent. died, $3\frac{1}{4}$ per cent. from the operation and $13\frac{3}{4}$ per cent. from tuberculosis. Of the patients 45 were males, and 47 females. The majority of the patients were aged from 6 to 20 years, 30 being between 16 and 20 years of age. None of the patients were over 30 years old.—*Centralbl. für Chirurg.*, No. 31, 1883.

PAPAYOTIN IN DIPHTHERIA.—DR. CRONER at a late meeting of the Verein für Innere Medicin, reported a case of diphtheria which he treated very successfully with papayotin. The attack was a severe one, in a boy, with extensive deposition of membrane and pronounced general symptoms; the sensorium being affected, and the morning temperature reaching 104° F. The throat was painted every hour with a four per cent. solution of papayotin, and in five hours the membrane was reduced to a sort of loose network, which soon disappeared. The temperature at the same time fell from 104.9° to 102° F., and convalescence progressed without any return of the membrane. Other members of the Society reported similar cases, although one or two had seen but small results from the drug; but the mass of evidence was in favor of its being at least as efficacious as, if not more so than, the forms of treatment already in use.—*Lond. Med. Rec.*, July, 1883.

EXTRACT OF CALABAR BEAN IN DIARRHŒA.—DR. MASCHKA, of Carlsbad, has found the extract of Calabar bean very serviceable in intestinal catarrh, diarrhœa, atony of the ailmentary canal, etc., and explains his views of its mode of action. The physiological action of Calabar bean, Dr. Maschka states, is upon the muscular coat of the intestines, producing contraction thereof. In acute catarrh of the intestines, it controls the hyperæmia of the mucous membrane, and arrests the excessive secretion. Under its continued use the calibre of the intestine becomes narrow, while its contents are held back or only partially expelled. In cases of habitual atony of the muscular coat, it produces a normal evacuation of the contents of the bowels. Dr. Maschka gives it the preference over preparations of opium, as its continued use does not produce the injurious effects of the latter. Although the author has not much experience of the use of this drug with children, he argues *à priori* that it has a great advantage over opium in their case, as being free from the dangers that attend the administration of opium to children.—*London Med. Record*, July, 1883.

RESECTION OF THE LUNG IN ITALY.—This operation was performed on July 6, by PROF. RUGGI, on a woman, æt. 30, for a vast phthisical cavity of the right lobe. The entire lobe was removed through an opening in the anterior superior wall of the thorax. The second and third ribs were excised for a distance of nearly three inches, the pleura opened and detached from the lung, without the least respiratory or circulatory trouble. The operation lasted about one hour and a half. Though the pulse, respiration, and temperature remained normal for thirty hours, the patient sank and died in a few days.

FOURTH CASE OF DIVULSION OF THE PYLORUS.—PROF. LORETA performed his fourth case of divulsion of the pylorus on July 12th, for pyloric stenosis. There were no untoward after-symptoms, and the patient was practically well on the tenth day.

SALICYLIC PASTE.—LASSAR recommends a paste for the skin in cases in which ointments are not borne, and more particularly recommends a salicylic paste in eczema. The advantage of the paste over ointment is its porosity. The formula is ℞ Acidi salicylici, 2 parts; vaselin, 50; zinci oxidi, amyli, āā 25; M.; leniter terendo fiat pasta.—*London Med. Record*, July, 1883.

THE SECOND GASTROSTOMY IN ITALY.—DR. FRANCESCO SUPERNO, of Pondidera, has resected the pylorus of a man æt. 43, who for ten months had suffered from gastric carcinoma. Fifty sutures were put in. The patient died of peritonitis on the third day. The autopsy showed union by first intention throughout the wound, and no blood nor feces had escaped into the peritoneal cavity.

CORROSIVE SUBLIMATE IN DIPHTHERIA.—KAULICH, believing diphtheria to be due to an organism, selects corrosive sublimate as the best germicide to treat this disease. He washes the false membranes of the mouth, nose, and throat with a $\frac{1}{20}$ to $\frac{1}{10}$ per cent. solution. In children who had undergone tracheotomy, the trachea was washed with the same solution. The application was made four times a day, or sometimes even every two hours. Inhalations of a solution of only .005 per 1,000 were used for fifteen minutes every hour or at more extended intervals. Internally, he administers to children from 1 to 2 centigrammes (= about $\frac{1}{6}$ to $\frac{1}{3}$ grain) of the drug daily in albuminous water, to which a little cognac and sugar have been added.—*London Med. Record*, July, 1883.

THE FIRST OVARIOTOMY IN SMYRNA.—The first ovariotomy in Smyrna was performed in May by DR. VILTORE BELLELI, at the Rothschild Hospital, in a woman 45 years of age. In spite of very unfavorable symptoms the woman recovered.

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SATURDAY, SEPTEMBER 1, 1883.

NEW TESTS FOR SUGAR—INDIGO.

IN our last issue we gave an account of the new picric acid test for sugar in urine, suggested by Dr. Johnson.

Another test recently recalled to the attention of the profession by Dr. George Olliver (*Lancet*, May 19) is *indigo*. It will be remembered that when this intensely blue substance is associated with glucose, it is colorless, as is the case in nature, where, in the juice of the indigo plant, the indigo is combined with indiglucin, a saccharine substance. Reasoning from this fact, Dr. Olliver thought the color of indigo should be discharged by the glucose in diabetic urine, and upon trial found this to be the case. Mehu had also announced, in 1880, that when the carmine of indigo or the sulphindigotate of sodium is heated with carbonate of sodium and a solution of glucose, the blue color is converted gradually into green, then into red, and finally into yellow. A solution prepared by adding to a solution of sulphindigotate of sodium, carbonate of sodium, and redissolving the minutely divided precipitate by heat, possesses a greenish-blue tint, and, according to Dr. Olliver, forms a reliable, sensitive, stable; and non-caustic test for sugar. But Dr. Olliver prefers to use test-papers, which are little pieces of filtering paper about an inch long and one-quarter wide, impregnated with the constituents of the test. One of the papers is dropped into an ordinary half-inch test-tube, and enough water added to just cover its upper end. The indigo is then dissolved out of the paper, and one drop only of the suspected urine is allowed to fall into the tube, and heat applied. If sufficient sugar be present, shortly after the first simmer, a beautiful violet tint spreads throughout the bright-blue solution; very quickly this deepens, and passes into purple, this into reddish purple, which gives place to various tints of red, orange-red, orange, and, finally, straw yellow, which remains without further change, though heated ever so long. On shaking the tube, the colors return in the reverse order to that in which they appeared, terminating in the original blue. The shaking permits the more ready access of oxygen of the air to the fluid. The same change takes place in a longer time on standing. Boiling again removes the color, which again returns on exposure, and thus the alternation may be kept up indefinitely.

Dr. Olliver does not give precise directions how to make these test-papers, but they are prepared by Wilson & Sons, pharmaceutical chemists, Harrogate. We have used them, and find that the blue color is reduced by diabetic urines containing such an amount of glucose that five or six drops are required to produce a distinct reaction with a cubic centimetre of Fehling's solution. We did not, however, obtain the play of colors described by Dr. Olliver. The purple was caught, but was soon replaced by the light yellow. In another instance, where eight drops were necessary to produce the first response with a cubic centimetre of Fehling's solution, but where a cubic centimetre of urine appeared to decompose all of the copper, as much as two drachms of urine were added to the indigo solution without obtaining any reaction whatever. This same urine showed a beautiful reaction with picric acid by Dr. Johnson's method. When it is remembered that a single drop of diabetic urine will often discharge the color from a whole cubic centimetre of Fehling's solution, it is evident that the urines with which we experimented were not highly charged with sugar. At the same time, as tried by them, the indigo test-papers were found less delicate than either the copper or picric acid test. But we would not, on this account, condemn the indigo test, which has not been fully elaborated. Experiments have just been commenced with it. Our own are open to objection, being confined to the use of the imported test-papers, which may have been impaired by age. Dr. Olliver claims for it great delicacy—such that whenever one drop of the urine gave no reaction with the test, Fehling gave no precipitate, and where, with various urines, a deep violet tint would appear on the addition of the second, third, fourth, fifth, sixth, or more drops, Fehling's solution gave either negative results, or was doubtful. He is, moreover, inclined to believe that when urines which give the well-known yellowish-green reactions with Fehling's solution fail to give any response with the indigo, they are not due to sugar, and when they do respond with indigo, even in producing the first purple tinge, sugar is the responsible constituent, although he admits that normal urine gives a distinct violet after the fifth or sixth drop, which he ascribes to normal sugar. We shall have something to say at some future time with regard to normal sugar, the existence of which in urine we are inclined to doubt.

It will be seen that our own experience does not confirm this view of the extreme delicacy of the indigo, but for the reasons named, we do not desire this view to be final. We trust, our readers may be induced to try the new reagent, for it is only by the experience of numerous careful observers that the truth can be arrived at.

It is claimed, too, that this test is not interfered with by albumen, blood, pus, bile, uric acid, or the alkaline sulphides, which are common in stale albuminous urines.

THE SEWAGE QUESTION IN PARIS.

It is a mistake to believe that the question of the sewerage of Paris has been definitely and satisfactorily settled. On the contrary, the important problem of providing a proper system of sewerage has been pending for many years, and of late has been brought into special prominence by the publication of the results of the investigations of a Commission of Inquiry appointed in 1880 by the Minister of Agriculture, etc.

As originally designed, the Paris sewers were not intended to carry off anything but surface water, but they have gradually been brought into requisition for other uses, and it is now estimated that at least one-half of the sewage of the city, both solid and liquid, finds its way into these conduits.

There are two systems of sewage disposal for the city. The older one, now partly in use, depends on cesspools mostly located under the houses. In the more modern system an upright canister-shaped metal holder is used to receive the excreta, and provision is made for the escape of the liquids into the sewers. It is these systems that have proved unsatisfactory, and all are agreed that "permanent cesspools, as forming a structural portion of the dwelling, should be superseded." But the manner in which this is to be accomplished is the knotty point over which, at the present time, there is much controversy.

Two very different plans have been proposed as a substitute for the present imperfect systems: the one by the Commission of Inquiry, and the other by the City Engineers. The Commissioners recommend a modified separate system consisting of iron reservoirs and a continuous line of metallic piping, which it is proposed to lay in the sewers already constructed, and specially designed to carry off the solids to the suburban chemical works for utilization. The City Engineers firmly adhere to the plan of direct and immediate delivery of all sewage from the house, by means of a hydraulic siphon, into the sewers, and thence to the pumping stations, with plenty of water as a vehicle. This scheme contemplates the final closing of extramural sewage utilization works; the complete abolition of permanent cesspools, of ventilator shafts, and of cesspool emptying; the increase of the water-supply per inhabitant, and the final disposal of the sewage by spreading it upon the land of the peninsula of Gennevilliers.

The scheme of the Commission of Inquiry, which is not unlike the Lienur pneumatic process, except in some minor details, is opposed on account of the enormous outlay required to put it in successful operation. It is estimated that at least 600 miles of piping will be required, and, in addition, at least 230,000 soil-pipes, together with the necessary reservoirs. M. Durand Claye's estimate of the cost of the entire work, including that part of the system of sewers which awaits completion, is placed at £6,000,000. It is also urged as an objection, that the frequent emptying of the iron cesspools carried on in the public streets, although proposed to be done by suction, will, in some part of the process, necessitate direct communication with the outer air, and be productive of a serious nuisance. On account of insufficient gradients, pumping stations will be required here and there in the midst of populous districts; and it is further alleged that the scheme will require the retention, in the outskirts of the city, of poudrette works, which, it is maintained, are nuisances, in spite of every attempt to render them inoffensive in character.

In opposition to the municipal scheme it is contended that the sewers cannot be made water-tight; that the gradients are insufficient for the kind of work required; that the addition of the fecal matter of the population to the sewage will cause unwholesome effluvia; and that the germs of diseases conveyed in the sewage will not be destroyed by the plan of irrigation.

The city engineers disprove the allegation that sewers cannot be made water-tight by a reference to the experience in connection with such works in the city of Paris itself, where it has rarely happened that any leakage has occurred in the sewers, even from those which have been exposed to pressure. It is admitted, that a few miles of sewers (70) have insufficient gradients, and not unfrequently, on this account, become obstructed and give rise to foul exhalations; but these defects are not sufficiently serious to condemn the whole system, nor such as cannot be easily remedied.

As a thorough ventilation of the sewers by direct communication with the air above ground, is part of the scheme of the Board of Engineers, this proposition has been condemned on the assumption that the result will be a serious deterioration of the air of the streets. This objection has but little weight if dependence be placed in the results of a series of analytical tests recently applied by M. Wurtz, of Paris. Assuming that the sewers are properly constructed, it has been proved that the free admission and circulation of air from above ground not only dilutes and disperses noxious admixtures, but actually destroys them by chemical action.

With regard to the plan proposed by the Municipal Engineers, which contemplates the direct delivery of both solids and liquids into the sewer, and the disuse of filter tanks and separators, and the discontinuance of the old cesspool system, it may be said that it is exceedingly simple and trifling in cost, compared with the scheme advanced by the Government Commission. It is urged, that while it may not be a perfect system, it is, considering all circumstances, the most rational one to adopt; and if, after a fair trial, the dangers and objections to it are verified by practical experience, it will then be not too late to substitute the separate system of metallic piping, commended by the Commission.

One result may be predicted almost with certainty as the outcome of the present agitation of the subject; namely, that before long, Paris will be provided with an improved system of sewage-removal, that whether the one or the other of the above-mentioned plans be adopted (both of which are intended to supersede permanent cesspools and the storage of excreta upon the premises), the results will be of the greatest advantage to the comfort and health of the citizens of Paris.

THE TREATMENT OF HEMORRHAGIC MALARIAL FEVER.

We publish in the current number an analysis of thirty-three cases of hemorrhagic malarial fever, with special reference to the use of quinine, by Dr. R. D. Webb, of Alabama. A comparison of his results with those of Dr. E. D. McDaniel, related in our issue of July 21st, will prove instructive. Both of these gentlemen reside and practise in the heart of the hemorrhagic malarial district, and both are men of large experience. Dr. McDaniel speaks of quinine as a "dangerous and uncertain remedy," and as "determining an unfavorable result." Dr. Webb regards it with great favor.

Dr. McDaniel narrates eighteen cases, of which twelve were treated with quinine, and six without. Of the twelve cases treated with quinine, seven, or 58.33 per cent., recovered, and five died; of the six treated without quinine, all recovered. Dr. Webb saw thirty-three cases, of which nine were in consultation. Of these, twenty-six were treated with quinine, and seven without. Of the former, twenty-three, or eighty per cent., recovered, and three died. Of the latter, all died.

Thus it will be seen that in Dr. McDaniel's experience no cases treated with quinine recovered, and in Dr. Webb's, none treated without quinine recovered. Statistics are proverbially unsatisfactory, but these results are, at first thought, confounding. In such an important matter as this, however, one is inclined to look below the surface, and seek an answer to the question, "Had I hemorrhagic malarial fever, would I prefer to be treated with quinine or without it?" Such an examination cannot fail to discover the following: In the first place this disease is acknowledged by all, including Dr. McDaniel, to be malarial in origin, for which, at some period of the disease, quinine is generally acknowledged to be a suitable remedy.

Again, although it is true that all of Dr. McDaniels' cases treated without quinine recovered, more than half (59.33 per cent.) of those treated with quinine also recovered, and it does not follow that if those which recovered without quinine had been treated with it, they would have died. Further, if we sum up the cases of both writers, it will be noted that out of fifty-one cases in all, thirty-eight were treated with quinine and thirteen without. Of the former, thirty recovered and eight died. Of the latter, thirteen treated without quinine, seven died and six recovered. So that from either point of view the result seems to be in favor of a quinine treatment.

YELLOW FEVER.

The origin of the outbreak of yellow fever at the Pensacola Navy Yard is thus far very obscure, but a court of inquiry on the subject has been ordered by the Navy Department, at the request of the Commandant of the Yard, and no doubt every effort will be made to trace it. Surgeon Owen died on the 22d, and on the same day two suspicious cases were reported on Palofox wharf in Pensacola. They were at once transferred to the quarantine hospital, and the house from which they were removed was burned. Soon after their removal one of the cases died, and Surgeon Murray of the Marine-Hospital Service, decided from the post-mortem that it was not a case of yellow fever, but one of pernicious hemorrhagic malarial fever. In this opinion he was sustained by several physicians, but others disagreed, and the true nature of the case is still somewhat uncertain, although it seems probable that Surgeon Murray's opinion is the correct one.

No additional cases are reported in the town, and only two or three at the Yard, and the panic among the inhabitants is subsiding. A house to house inspection of the city has been made, and no suspicious cases reported.

The rumors of a case at New Orleans appear to be without foundation, and there seems little reason to fear any extended epidemic in the United States this year.

The cholera mortality is steadily diminishing, and the disease has not extended beyond Egypt. At the present writing, it looks as if M. Fauvel's prediction at the Academie de Médecine is likely to be fulfilled, and that the sudden and severe epidemic of 1883 within a week or two will have ceased.

We congratulate our friends of the New Code on the announcement of the Kansas City College of Medicine, which is "designed to fully meet the wants of an age tired of the dogmas and pathys of an obsolete past." The faculty "is composed of gentlemen of culture from every school and system of medicine that is now recognized by its merits," and includes a professor of "homœopathic therapeutics," etc., and a "professor of allopathic theory and practice." It has a faculty composed of fourteen professors and a board of directors numbering eleven. Of the eleven directors, nine are also members of the faculty.

The announcement before us, which is the second annual one, contains a list of eighteen matriculates at its first session, that of 1882–83. Of these eighteen, eleven received *ad-eundem* degrees at the end of the session, and seven were graduated. These facts speak for themselves, and we respectfully call the attention of the secretaries of the State boards of health and other licensing bodies to them.

Apropos of the above, we have recently had placed in our hands a letter from a teacher in a Southern medical college who, having heard through a friend that a gentleman intended to study medicine, writes to present the claims of "the medical centre of the South and West, the healthiest large city in America—beyond the reach of yellow fever," etc. Good board for little more than half of what it can be had for elsewhere, and railroad tickets at half rate, owing to a local fair, are among the inducements. He concludes by saying that he is allowed a certain number of beneficiaries, and will take as one the gentleman written to and charge him only fifty dollars, instead of eighty.

What indeed are we coming to? This prize-gift spirit of enterprise, worthy of a third-rate business, deserves to be mentioned only to receive from the profession the severe condemnation it merits.

SPECIAL ARTICLE.

CHOLERA DISINFECTION: ALSO, TYPHOID.

The existence of a cholera germ—a microbe, or an organized ferment, capable of indefinite multiplication—is one of the facts not susceptible of demonstration, but is rendered in a high degree probable by the mode of propagation and the clinical characteristics of cholera. That the cholera germ is contained in the excreta, and that it diffuses widely through air and water, but not more rapidly than the rate of human communication, are also facts attested by a vast number of well-directed observations. It follows, therefore, that cholera disinfection includes the treatment of the excreta coming from the sick with cholera, and the purification of air and water, the chief media by which the germ or poison is introduced into the human organism.

The agents capable of destroying germs in dejections outside of the body are very numerous, since it is not necessary to exclude the most powerful. Hence, we are not confined to the use of germicides which have proved to be most effective in the body. The problem to be solved in the disinfection of cholera excreta is—what agents are at the same time most destructive, most available, and least expensive? Fire stands first. When clothing, bedding, carpets, and similar articles are soiled by cholera discharges, no treatment is so thorough as burning them. When suitable ovens are available, an efficient means of disinfection is heat, of intensity just short of injury to the fabric. As such facilities are rare, the treatment to be applied consists of boiling water, steam, and such gases as will be mentioned presently under the head of aerial disinfection. The importance of avoiding soiling the bedding, clothing, carpets, and other cotton, linen, or woollen fabrics is very great, since such articles do much to retain, preserve from injury, and promote the diffusion of cholera germs. All who have had to do with cholera patients, know how difficult it is to secure the reception of the dejections in suitable vessels; but it should be done as far as practicable, and the disinfection should be carried out at once. As the rule of action should be *tuto cito et jucunde*, the material of disinfection ought to be kept in readiness, and the discharge, whether by vomit or stool, treated at once. Any satisfactory (*jucunde*) disinfection of such materials can be effected only by the abundant, rather lavish, application of the agent employed, so that every particle of matter and part of the vessel containing it be directly acted on.

It has been quite clearly shown that the corrosive chloride of mercury, is the most effective germicide, *per se:* in other words, that no agent brought in contact with the germs themselves, so certainly kills them; but when the sole object is to destroy, there are more destructive agents available. Nevertheless, there being conclusive evidence of its germicide power, a saturated solution of corrosive sublimate may be used with confidence. According to the description of the *United States Pharmacopœia* (1880) it is "soluble in sixteen parts of water and in three parts of alcohol at 59° F." Now, as alcohol has very decided germicide property, a solution of corrosive sublimate in common high wine, or unrectified whiskey, will be more effective than one in water merely. In a gallon of high wine, can be dissolved about one pound of corrosive sublimate, or in any quantity of high wine, corrosive sublimate may be dissolved to the point of saturation, and a tablespoonful of the solution will suffice for each dejection.

Very destructive, and comparatively inexpensive, is a solution of chloride of zinc. This can be readily prepared by dissolving zinc cuttings, or common zinc, in commercial hydrochloric acid. It can be used in this form or be further diluted by the addition of water. The official liquor zinci chloridi (*Pharmacopœia*, 1880) contains one hundred and seventy grains of the chloride to the fluidounce, and this is used for disinfection by mixing a pint of the solution with four gallons of water. The saturated solution prepared as above described, extemporaneously, is more powerful and may be diluted in the proportion of a pint to two or three or four gallons of water. Thus largely diluted it is suitable for the treatment of cesspools, or waterclosets into which the cholera discharges have been thrown, but for a destructive action on the germs in vomit or stool, the undiluted solutions—one, two, or three tablespoonfuls according to quantity—are decidedly preferable.

Next to the chlorides above mentioned are certain metallic sulphates—of iron, zinc, and copper. The most effective of these is the cheapest—sulphate of iron. In the form of commercial copperas, either as powder or in solution, sulphate of iron may be very freely employed without risk. As it is soluble in cold water in the proportion of one to two, this is the measure of strength suitable for disinfection. In the case of liquid dejections a handful of finely pulverized copperas may be added, and as it is inexpensive need not be spared. For the closet, a saturated solution—a pound to a quart of water—and for the cesspool, ten pounds to a bucketful of water will prove effective if used daily during the existence of a cholera epidemic. Saturated solutions of zinc and copper are much more expensive, and probably less effective than the copperas.

These metallic disinfectants are without odor, and hence to the uninstructed may seem inefficient, for in the minds of many the destruction of germs of putrefaction and of disease consists in the production of an ill smell, or the substitution of one foul odor for another. The most notable antiseptics are those which give forth some unpleasant fumes or vapors. The most important of these are members of the phenol group. Common or impure carbolic acid, undiluted, or mixed with some absorbent, is the favorite at present; but although fatal to some minute organisms, it is not equally injurious to all. If used for the disinfectant treatment of cholera discharges, one or two tablespoonfuls should be added to each, whether by vomit or stool. For the cesspool or water-closet into which such evacuations are emptied, the metallic chlorides and sulphates above described are better. The quantity of undiluted carbolic acid recommended for the destruction of cholera germs in the discharges may seem excessive, but, by careful examination, it will be found that the proportion of the disinfectant to the volume of fluid-matter is little more than five per cent. The various derivatives and congeners of carbolic acid are rather less efficient and more expensive. Amongst these may be mentioned salicylic acid, resorcin, thymol, etc. Various other disinfectants are available for the same kind of treatment, as chlorinated lime, iodine, bromine, chloral, but they are less efficient, less easily managed, and more expensive than those already discussed. It cannot be too strongly insisted on that all cholera evacuations should be acted on by the disinfectant selected for this purpose, as soon as passed, and after the vessels are emptied, they should be thoroughly washed with a sufficient quantity of the agent undiluted, or in a saturated solution. When no longer required, such vessels should be broken up and buried with some chlorinated lime, or subjected to high heat in an oven. Wooden close stools retain in their crevices the dried excreta, and are afterwards sources of infection: they should be burned, or subjected to a sufficiently high temperature.

What shall be done with cholera discharges in the homes of the poor, in country places where human ordure is cast on the ground, and in all those houses inhabited by people too ignorant to appreciate the character and source of the danger which menaces them, or too poor or too mean to supply themselves with the material of disinfection? In cities and towns, provided with an efficient health administration, the ignorant and the parsimonious are compelled to carry out the measures of protection necessary. But there are vast stretches of territory and considerable populations, to whom all hygienic precautions are unknown, and from whom, a cholera epidemic appearing, not even the simplest means of prevention can be expected. Cholera dejections soil the bedding, the carpets, floors, furniture, and are thrown out on the ground at any convenient point. What opinion, soever, we may have of Pettenkofer's theories, it can hardly be denied, we think, that the surface-water (*grundwasser*) is an important agency in promoting the diffusion of the cholera poison. To cast out on the ground, or in shallow pits, the dejections, is to insure contamination of the surface-water, and afterwards the general water supply. Such is an important source of contamination of the water supplies to great cities. The question for solution is, how to prevent the contamination of the ground-water when cholera prevails in outlying villages and country places, unprovided with methods of disinfection? What cheap and readily applied disinfectants are available? The principal resource is in absorbent material. Dry earth, sifted to remove coarse particles, acts well and can be used freely. The vomit and stools thus treated should not be cast out on the ground, but be placed in tight barrels away from houses, or thrown into pits dug in coarse sand or gravel, remote from water-courses. If placed in barrels the contents can be poured into suitable pits after some weeks or months, and the barrels burned. Contaminated clothing, too useful to be destroyed, can be disinfected most cheaply by exposing the articles to sulphurous acid fumes, as hereinafter described, or by subjecting them to sufficient dry or moist heat.

As the air is often the carrier of cholera germs, it is necessary to employ measures for its purification during the existence of the epidemic. Cholera matter containing the mysterious germs, dried and pulverized, readily floats in the air and lodging in the mouth and fauces, reaches the stomach with food and drink. The problem of aerial disinfection, although simple in its terms, is most difficult of satisfactory solution. As germs in the air can be acted on only by gases or vapors, the agents are few in number, and the results obtained uncertain. First in the list may be placed the oxidizing disinfectants—chlorine, iodine, bromine, etc.; and second, the deoxidizing, as sulphurous acid. The proportion of the gas to air required to destroy the vitality of disease germs cannot be stated with precision. This much is certain, however—the proportion effective is irrespirable. Articles of clothing and bedding to be acted on by these gases should therefore be hung up in a close apartment, as much gas should be disengaged as can be contained in that space, and the action should be kept up for many hours. Chlorinated lime is a convenient substance for furnishing chlorine gas in small quantity, but when a large amount is required, it can be best obtained from a mixture of common salt (18 parts), and black oxide of manganese (15 parts), acted on by sulphuric acid (45 parts), diluted by water (21 parts). Chlorine gas is unsuited to the sick room. When an aerial disinfectant is required in the apartment of a cholera patient, iodine serves a useful purpose. Some crystals, or the tincture, placed in a saucer on the mantel, gives off the vapor freely at the ordinary temperature, and much more freely if warmed. As the action of these oxidizing agents is supposed to be due to the ozone liberated by the decomposition of watery vapor, it may be better to produce this agent directly. This is readily accomplished by the oxidation of phosphorus—by placing in a vessel containing some water, a freshly-scraped stick of phosphorus: water is decomposed and a part of the oxygen passes into the state of ozone. An elegant mode of procuring the disinfecting quality of ozone in the sick chamber, is by pulverizing ozonic ether—a solution of peroxide of hydrogen in ether. Placed in the bottle of the hand-ball atomizer, or in the ordinary perfume atomizer, the ozonic ether can be effectively sprayed in the air of the apartment. This has been shown to possess a high degree of disinfectant property; but it is also very inflammable, and cannot be used in a room having an open light or fire.

The deoxidizing disinfectant of most power is *sulphurous acid.* The simple combustion of sulphur in the open air produces this gas. Notwithstanding its suffocating effects, any respirable quantity does not appear to have toxic effects. It is, at the same time, the least expensive and the most active of the aerial disinfectants. A solution of the acid, sufficiently concentrated, can be used against the solid excreta. Contaminated clothing and bedding before washing can be effectively disinfected by the gas by generating it freely in a tight apartment, and continuing the action for many hours. The rooms, halls, and passages of a house containing cholera cases should be fumigated twice a day with the gas. As has been stated, this agent does not affect the health injuriously when breathed in a quantity less than the irrespirable, although, irritation of the larynx, coughing, oppression of breathing, and a strong metallic taste are caused by it. Chlorine is far more dangerous, for there is reason to believe pneumonia may be excited by a quantity which does not cause much distress. The bleaching effects of sulphurous acid are due to the formation of colorless sulphites, which being soluble are washed out. Certain fabrics may be much damaged by it, therefore. But we cannot too strongly emphasize the fact, that no kind or degree of aerial disinfection will take the place of such care in the reception and disposition of cholera excreta, as will prevent the diffusion of dried cholera matter in the air.

More frequently, contamination of the water-supply is the source of infection. Fortunately, we have a ready means of destroying the cholera germs in water. These germs are probably destroyed at the temperature of boiling water. During the existence of an epidemic—for some time, indeed, before its actual advent—only water that has been boiled should be drunk. As, however, boiling water is insipid, because of the loss of its gases, it should be aerated by passing though one of the now much-used domestic filters, or by pouring from one vessel to another through the air. In this way, all its natural liveliness will be restored.

It should be clearly understood that contaminated water is not rendered innocuous by boiling. Some germs, there is reason to believe, resist successfully a heat of 212° F., and organic matter is not destroyed at this temperature. Not all the constituents of sewage can, therefore, be rendered harmless by boiling the drinking water containing it. This fact, then, must give additional force to our suggestions regarding the anxious care which should be given to the reception and final disposition of cholera excreta.

Whilst we thus fix our attention on Egypt and watch with anxious solicitude the progress of the cholera epidemic, we should not be unmindful of an evil always present with us. It is hardly doubtful that typhoid, like cholera, is propagated by a peculiar germ. Notwithstanding the wide differences between cholera and typhoid as regards their natural history and development, there is a certain similarity in the behavior of their causal germs. Of the two, the typhoid should be more feared, and should be the object of more careful preventive measures. The typhoid germ is always in action, and, when the aggregate mischief is summed up, it is found to be, if not more, scarcely less destructive.

The typhoid, like the cholera germ, is probably contained in the dejections of the patient. It may enter the water-supply, or, dried and pulverized, be distributed by the air, or be carried up with the gases of putrefaction from cesspools and sewers. It lies dormant for an unknown period, and acquires activity under conditions not now ascertainable. Entering the human body like the cholera germ, it finds its favoring habitat in the intestinal canal, but differs from the latter in exciting a slowly developing disorder.

It is obvious, then, that the disinfectant treatment of cholera poison is equally applicable to the typhoid. If we substitute for "cholera disinfection," *typhoid disinfection*, our remarks may still be made. In closing, we can render no better service than to urge on our readers the necessity of a careful and complete disinfection of typhoid dejections, if we would rid the community of a perennial pest.

REVIEWS.

A Practical Treatise on Impotence, Sterility, and Allied Disorders of the Male Sexual Organs. By S. W. Gross, A.M., M.D., etc. Second edition, thoroughly revised. Large 8vo. pp. 176. With sixteen illustrations. Philadelphia: Henry C. Lea's Son & Co., 1883.

The author of this monograph is a man of positive convictions and vigorous style. He utters no uncertain sound when he speaks, and states his opinions, as he feels them, strongly. This is justified, in the case of his publications thus far issued, by his experience, which has been considerable, and by his study, which has gone hand in hand with his experience. In regard to the various organic and functional disorders of the male generative apparatus he has had exceptional opportunities for observation, and his book shows that he has not neglected to compare his own views with those of other authors. The result is a work which can safely be recommended to both physicians and surgeons as a guide in the treatment of the disturbances it refers to. It is the best treatise on the subject with which we are acquainted.

Transactions of the College of Physicians of Philadelphia. Third Series. Volume the Sixth. 8vo. pp. xliv. 451. Philadelphia: Printed for the College, 1883.

The present volume of *Transactions* is by far the largest and most valuable that has ever been issued by the College, and reflects the increased interest in its welfare taken by the Fellows.

The volume contains thirty-one papers, full abstracts of which have, from time to time, appeared in our reports of the meetings of the College. Two of the most notable papers were read by special invitation of the College. That on the *Bacillus Tuberculosis* will be remembered as a lucid and most interesting exposition and demonstration made by Dr. Whittaker, of Cincinnati, just after his return from study in Koch's laboratory, and Prof. Leeds' able contribution to our knowledge of the value of the various *Infant Foods* now on the market is still fresh in the minds of our readers.

The volume is handsomely printed and bound, and has been carefully edited by the Recorder of the College, Dr. J. Ewing Mears.

SOCIETY PROCEEDINGS.

PHILADELPHIA ACADEMY OF SURGERY.

Stated Meeting, May 7, 1883.

The President, S. D. Gross, M.D., LL.D., D.C.L., in the Chair.

Dr. John H. Packard reported the following case of

SUPRA-HEPATIC ABSCESS.

B. Bradley, æt. 33, an Irishman, of good constitution and sober habits, had been under the care of Dr. T. Stanton Crowley for several weeks, his first symptoms having been severe chill and excessive abdominal pain. Subsequently he had much pain, flatulence, and constipation. He was several times threatened with general peritonitis, but the symptoms were controlled by turpentine stupes, etc.

Dr. Crowley asked me to see Bradley, on March 31, on account of a firm, tense swelling in the right hypochondrium, attended with some hectic and a good deal of embarrassment of respiration.

On the 19th of April, I saw the case again. There was now decided fluctuation, but percussion was abnormally clear all over the right chest and down over the tumor, and there was metallic tinkling on auscultation. We decided upon aspiration.

April 20, Dr. W. Pepper examined Bradley, and agreed with us as to the propriety of aspiration, which I proceeded at once to perform, but could only obtain a quantity of very fetid gas. At the time, we were under the impression that the instrument had entered a distended colon. The operation gave a considerable amount of relief to the breathing, but the man continued to sink, and died about thirty hours afterward.

An *autopsy* was made on the 23d by Dr. Crowley and myself. The body was well developed and muscular; it had been kept on ice, and the degree of rigor mortis could hardly be determined. There was no decomposition. On cutting into the abdomen, a cavity was opened, which proved to be an enormous supra-hepatic abscess, the walls lined by a thick deposit of cheesy lymph. From this cavity there was sponged out about a gallon of fetid pus; it contained also, as nearly as we could judge, a like bulk of offensive gas. The diaphragm was pushed very much upward, compressing the right lung into an extremely small space. Within the very much reduced pleural cavity there was thick, creamy pus, while the base and inner and posterior surfaces of the lung were firmly adherent by lymph. The pericardium and left pleura were full throughout of inflammatory adhesions, and the pericardium covering the heart was much thickened by lymph effused in the subserous areolar tissue. Traces of general peritonitis were observed. The liver was mottled, and stained of a dark olive-green to the depth of about a quarter of an inch all over its upper surface. It was clear that the aspirator needle had been inserted into the cavity of the abscess, but that the surface of the liquid was beyond its reach, so that a portion of the gaseous contents only could be withdrawn in this way.

Dr. J. Ewing Mears thought that we could readily see why, from the position of the abscess, the patient being on the back, that there should be resonant percussion on the anterior surface of the chest, and that the resonance would be tympanitic. As depicted on the board, it represents a case of hydro-pneumothorax—air and liquid in the chest.

DR. PACKARD replied that it was tympanitic. It was abnormally resonant. Dr. Pepper was inclined to think that it was a case of hydro pneumothorax.

THE PRESIDENT asked how far the fluid was from the external surface?

DR. PACKARD said it was so far that when the aspirator needle was introduced as far as it would go, it did not reach the fluid. Dr. Pepper suggested that if the man lived, the aspirator needle should be introduced in the ordinary place for aspirating the pleural cavity. In which case, we should have drawn off some liquid, but would have given the patient no relief.

DR. CHARLES B. NANCREDE said that in connection with this case he would like to mention another of peri-hepatic abscess. In many respects it was like the one described, but there was no collection of gas in the pleural cavity. The history of the case is as follows: A young man, aged about 19, was admitted to the medical ward of the Episcopal Hospital under the care of Dr. Morris Lewis. There was absolutely no history of any kind to be elicited. He stated that he only began to complain ten days before admission; previous to that time he was well. He then became sick in a vague sort of a way, with malaise and the like; of course, if he had been under careful observation at this time, hectic would have been detected. On admission, the thermometer and pulse-rate gave evidence of suppuration in some part. The physical examination showed that the liver was apparently pushed up about two ribs above the normal; dulness extended downward to about two inches above the umbilicus. In the back, fluctuation could be detected. Introducing an aspirating-needle at this situation, Dr. Lewis drew off half a drachm of very offensive fluid. His opinion was that it was an abscess of the liver. I came to the conclusion that it was peri-hepatic, and that one wall was formed by the colon, and that this accounted for the intensely fetid gas. I tapped him, and obtained pus on two or three subsequent occasions. He got very much better, but one night was found dead in bed. The post-mortem was made by myself several hours after death. Some frothy pus was found in the trachea, but although perforation of the stomach was found, there was no pus in the stomach. The cavity of the abscess could not have contained more than half a pint of fluid. The opening was three or four inches from any part of the abscess cavity. At the post-mortem there certainly was no portion of the gut or hollow viscera within several inches of the abscess cavity. The lungs were carefully removed and water forced into them, but no perforation was found. There was no pus in the stomach, nor any discharged by the bowel. How the pus got into the trachea and what was the cause of death, I do not know. What I should like to know is, where the fetid pus comes from when the gut has no connection with the abscess.

DR. JOHN H. PACKARD suggested that there had been an escape of pus, which had been vomited, and that a portion had been drawn into the trachea.

DR. NANCREDE replied that the opening in the stomach was three or four inches from the abscess.

DR. FERDINAND H. GROSS exhibited a

SPINDLE-CELLED SARCOMA.

The specimen of periosteal spindle-celled sarcoma which I have to exhibit, was removed by amputation of the right arm at the junction of its middle and upper thirds. The patient, Conrad Seybert, a German, aged sixty-two years, and by occupation a carpenter, presented himself at the out-patient department of the German Hospital, for the first time on April 23d (two weeks ago), and was admitted to the Hospital on the following day. My resident, Dr. A. B. Hirsh, who saw the patient when he applied to the dispensary, informs me that the man was in great pain, presented an anæmic appearance, and that his arm hung helpless by his side. On examination in the hospital, I found a tumor of the size of a large fist occupying mainly the posterior aspect of the lower end of the right humerus, extending over both condyles, but bulging out considerably on the inner side. It was slightly lobulated, and the greater part of the mass imparted a rather firm, somewhat elastic feel, while at several points it was quite soft, and at one of these the resident had made a puncture, believing there was contained here a collection of pus, which, however, proved not to be the case, a very little bloody fluid only escaping. The movements of the elbow-joint were much impeded by the proximity of the growth, but the structures of the joint itself did not appear to be involved in the disease, nor did this extend to the ulna or radius. The forearm and hand were swollen, the subcutaneous veins were not markedly distended; one of the lymphatic glands in the axilla, however, was slightly enlarged.

In making inquiry as to the early history of the case, the patient stated with positiveness that the tumor began to grow about ten months previously, having been preceded for several weeks by violent shooting pains that extended down the arm to the fingers. He had not for many years sustained any injury to the arm, but he stated that twice during his life he had hurt himself at the spot where the tumor afterwards made its appearance. Although these injuries occurred many years ago, the first one in his childhood, by a fall from a tree, I mention it here because the patient dwells upon the fact with some emphasis that ever afterwards this spot upon the inner condyle remained morbidly sensitive, and on being struck would usually continue to pain him for ten or fifteen minutes. When about twenty-eight years of age, while engaged at work as a carpenter, he fell from a building and again injured his arm at the same place, and was disabled from pursuing his usual occupation for three or four months. The occasional tenderness when the part was struck since continued. The patient is positive that on neither of the occasions stated did he sustain either a fracture or dislocation, and he is equally certain that no traumatism has since occurred. When he first noticed the new growth it was hard, immovable, and about the size of a marble. There appears to have been no complete intermission in its growth, though for a time its increase was rather slow, but later on it grew with constantly increasing rapidity. I pronounced the tumor to be a sarcoma, and advised amputation. On the 27th of April (ten days ago), after consultation with my colleagues at the hospital, the patient was etherized, and I performed the operation at the point above indicated.

The specimen as here presented has been bisected down to the bone, to which it is loosely attached. In the line of this incision the bone is denuded of periosteum, but shows no other signs of disease. The mass is soft, and I do not discover in it or its capsule any hard or long points. In dividing the tumor, a small area of interstitial hemorrhage has been exposed, but no large bloodvessels appear to course through the neoplasm. My colleague, Dr. Barton, took several pieces of the growth for microscopic examination, and informs me that it is a spindle celled sarcoma with some round cells intermixed.

Since the amputation the patient has had no bad symptoms. The traumatic fever did not reach a high grade, and the wound looks very well. He has no pain to speak of, and sleeps without the use of narcotics, while before the operation he required these constantly. The enlargement of the lymphatic gland in the axilla has entirely disappeared, and seems to have been simply hyperplastic, due to irritation, and probably contained no sarcomatous elements.

Dr. O. H. Allis said he had an opportunity of examining this case before he went to the German Hospital. He called at Jefferson College Hospital on two occasions, and we advised him to return and have the arm amputated, but he did not profit by the advice. I thought, and I presume that Dr. Gross also thought, that the tumor was attached so tightly to the bone that it might prove to be an osseous tumor. There were hard points on the tumor. In some places it was soft and nodulated, the softened parts being the size of an ordinary hen's egg. I was surprised to find that the bone was not involved, and that it could safely be removed at the point at which it was amputated.

Dr. Packard asked whether it would not have been safer if the arm had been removed at the shoulder-joint. Where the bone itself is involved, the removal of the bone at the articulation makes a great difference as to the probability of the return of the disease. Whether this rule holds good in regard to periosteal tumors, he could not say. It seemed to him that greater safety would have been insured by removal of the bone at the shoulder-joint.

Dr. F. H. Gross, in reply, said: My colleague, Dr. Barton, had the same idea that the tumor started from the bone, but I believed it to be periosteal. I thought that I could discover movement, and therefore preferred the operation which I performed to amputation at the shoulder-joint. There are others who, perhaps, can state whether an osseous tumor is more likely to return than a periosteal tumor.

Dr. Barton said that after the man was under ether, it was readily determined that the tumor was separate from the bone.

Dr. J. Ewing Mears said it is well known that the tendency to recurrence in spindle-cell sarcoma is not as great as in round-cell sarcoma. This mass was, he believed, a spindle-cell sarcoma. This, of course, could not be determined previous to the microscopical examination. In these cases of sarcoma, no matter in what part of the osseous system they may appear, it is, I believe, an accepted fact that they are not liable to return after complete extirpation.

The President.—The cause that produced the disease originally in the man may be able to cause the development of another tumor, but in the true sense of the term, this cannot be spoken of as a return.

Dr. S. W. Gross.—There are one or two points on which I may be able to throw some light. In the first place, let me say that the small spindle-cell is equally malignant with the small round-cell sarcoma. A small cell tumor, no matter what the morphology of the cell, constitutes a medullary tumor. The large spindle-cell sarcoma is comparatively innocuous.

In regard to the question whether or not it would have been better to remove the bone at the shoulder-joint, that could have been determined at the time of operation by making a section of the bone. The medulla is likely to become affected through the Haversian system. If the medullary tissue were affected, the amputation would have to be made at a higher point. In the case that has been described, I should have amputated at the shoulder-joint. Small-cell periosteal sarcomata are among the most malignant of all tumors. The chances are two to one that this man will die from secondary growths in some part of his body, as, for instance, in the lungs.

Dr. F. H. Gross.—I would ask whether these tumors are more common in the young, or in the old?

Dr S. W. Gross —Spindle-cell sarcomata are tumors of late life.

Dr. Mears.—I can only speak of some experience with periosteal tumors in connection with the jaws. I have removed a number of spindle cell sarcomata from both the upper and the lower jaws. Patients living in this city, from whom I removed such tumors six, eight, ten years ago, are still living and in good health. While the number is not large, yet I am inclined to think that in these cases the return of the disease is not to be expected. The specimens from these patients were examined by competent microscopists, who pronounced them to be small spindle cell sarcomata. The investigations of Dr. Gross in regard to this subject have been such as enable him to speak with authority, and I would ask him if it was not the opinion, a few years ago, that spindle-cell sarcomata were on the border-line, and were not as malignant as the round-cell variety?

Dr. S. W. Gross.—A few years ago we did not have as accurate a knowledge of histology, and we did not make the distinctions which we do now; but there is no doubt about the fact that the small spindle-cell sarcoma is excessively malignant as contra-distinguished from the large-cell tumor. I was speaking of sarcoma of the humerus and of the long bones, not of the jaws. The situation of the tumor greatly modifies its malignancy. Sarcoma of the jaw is far less malignant than sarcoma of the long bones.

Dr. C. Nancrede.—There is an anatomical fact which may explain why sarcoma of the jaws—especially of the upper one—should be less malignant than the same disease in the long bones. The disease tends to disseminate itself through the vascular system, and not through lymphatics. There is practically no medullary tissue worth mentioning in the upper jaw; there is very little intra-osseous vascular tissue whereby the general system can become involved.

Dr. J. Packard.—I do not want to prolong the discussion, but I should like to say that of all tumors we operate on, it seems to me that there can be none more hopeless than tumors of the upper jaw. I would ask if the members of the Academy have not had a similar experience? When we deal with polypus of the antrum, or polypi of the nose, which appear to be perfectly simple, we always have before us the grizzly shadow of what may be a malignant tumor of the upper jaw. Perhaps, after one or two operations, the disease returns and goes on to the death of the patient. It seems to me that the upper jaw must be made an exception; it may be that in the lower jaw sarcomata are not so dangerous. I can look back on very few cases in which the disease did not return. I know of one or two cases in which you, Mr. President, operated, and in which the disease returned and the patient succumbed.

The President.—I hardly remember one in which it did not return.

Dr. S. W. Gross.—Do you mean sarcoma as defined by the minute anatomy of the cell, or do you mean carcinoma? Carcinoma will return; are you speaking of sarcoma proper?

Dr. Packard.—My impression is that the tumors were sarcomata. I used to belong to the Pathological Society, and was its president for a couple of years; but, if I should now go to a meeting of the Society, I should keep very quiet. I know nothing of the refinements of pathology of the present day. I had always believed that malignant tumors of the upper jaw were sarcomata. It certainly seems to me that we may have here a distinction without a difference.

Dr. S. W. Gross.—There is an exceedingly great difference. The difference in situation makes a great difference as to the malignancy of sarcoma. Sarcoma of the breast is far more malignant than carcinoma of that part. I do not believe that medullary sarcoma of the breast is ever cured. Carcinoma appears in the young, sarcoma in the old.

Dr. Mears.—The position of a tumor—whether it arises from the periosteum or whether it arises from the antrum—makes a great difference as to its malignancy. Periosteal tumors arising from the fibrous periosteum can be removed without much probability of their returning; but when you have a tumor which takes its origin from the bone, you have a very difficult tumor to deal with.

In regard to the return of sarcoma, Dr. Gross has said that sarcoma is more malignant than a carcinoma. I saw a case in which a distinguished surgeon had removed a tumor of the breast which he regarded as cancerous. He asked me to attend an operation for the removal of a tumor from the vertex of the skull in the same patient. He showed me the breast, and said "there is a case of cancer cured." The cicatrix was soft and free from disease. I pointed to the large osseous sarcoma of the head, and said "there is your cancer of the breast." In other words, there was a return of the sarcoma. Microscopical examination showed that it was a sarcoma. The interval between the two operations was one year.

The President. — There is a great difference in regard to the return of the disease in other parts of the body after its removal from one locality.

Dr. Addinell Hewson.—Dr. Richard Norris, in a recent work on the pathology of the blood, calls attention to the growth of lymph-cells from the medullary canal of the bones. This may explain the very frequent origin of these tumors in the long bones. He gives my grandfather the credit of having described both the large and the small cells; he makes a difference in the value of the two in the fact that the small cells are the source of the blood-corpuscles and of all morbid growths.

Dr. Barton.—There has been another reason suggested why malignant tumors of the upper jaw are so liable to return: it is owing to the fact that it is necessary that these tumors should be developed to a considerable extent before a diagnosis that would warrant so serious an operation as the removal of the upper jaw can be made. The jaw is usually immensely disfigured, the tissues so thin that an exploring needle could be thrust into the antrum, and, perhaps, with openings and ulceration over the surface, or through the palatine process, into the mouth. Earlier than this the diagnosis cannot be made with such certainty as to warrant the removal of the jaw.

Dr. Packard reported that the patient operated on for

STRANGULATED VENTRAL HERNIA,

whose case was related at the last meeting (see The Medical News for July 14, 1883, p. 45), had continued to improve steadily. The wound had entirely healed, and the parts were quite free from pain or soreness. The silver-wire suture was buried in the tissues, but gave no sign of its presence.

Some delay had been caused in her return to active life by the formation of a superficial abscess in the supra-pubic region, but this has now opened spontaneously, and is healing up. Her bowels are regularly moved every day, and her general condition is excellent.

NEWS ITEMS.

MONTREAL.

(From our Special Correspondent.)

Endowment of McGill Medical Faculty.—At the semi-centennial celebration in October last, a gentleman offered the Faculty $50,000, if, by the first of August, 1883, an equivalent sum was raised in commemoration of the late Dean, Dr. G. W. Campbell. This has been done, and on the 19th inst. Hon. Donald A. Smith handed Dr. Howard a check for the $50,000, to be known as the "Leanchoil" endowment.

Mr. George Stephen has given $50,000 to the general hospital for a memorial wing to the late Dr. Campbell, who was for many years a surgeon to the Institution and Chairman of the Medical Board.

The Laval Question.—The battle between the two French Schools of Medicine in Montreal still rages fiercely, and the old *École de Médicine et de Chirurgie* is making a gallant fight for existence, though against terrible odds. The end is now not far distant. It will be remembered that when Laval University of Quebec, established a branch at Montreal in 1876, the existing French School was taken as its medical faculty. Troubles arose and the school severed its connection with Laval, preferring to be independent. Some of the professors, however, elected to remain with Laval and formed another faculty, and the struggle has been between these two bodies. The decrees from Rome state that there shall be but one Catholic school, and that Laval must be supported. The old school has had a good deal of encouragement from the clergy of the Montreal diocese, and moreover, it has had for years agreements with the Sisters of the Hotel Dieu, the Maternity Hospital, and the Dispensaries, whereby it controls the medical teaching, etc., in these institutions. Extreme measures have finally been taken by the Bishops, who have commanded the ladies of these establishments to close their doors to the professors and students of the old school, and admit only those of Laval. To this the sisters have consented, although in so doing they are probably liable to a civil action.

A pastoral letter from the Bishop of Montreal was read in all the churches a Sunday or two ago, condemning the old school as in rebellion against the church, and virtually excommunicating the professors and students. Dr. Desjardin one of the professors, has gone to Rome to make a final appeal to the Pope, and if unsuccessful, the school must doubtless close. The students remain loyal, and it is announced that the session will open as usual on October 1st. A legal action may compel the Sisters of the Hotel Dieu and Maternity Hospital to abide by their agreements, but if this is not done, the days of the old Montreal School of Medicine are numbered.

Canada Medical Association.—The Annual Meeting takes place at Kingston, Ont., on the 5th, 6th, and 7th of September, under the Presidency of Dr. John Mullin, of Hamilton.

Cholera Mortality in Egypt.—

	Cairo.	Alexandria.	Total for Egypt.
August 21,	1	37	131
" 22,	. . .	31	. . .
" 23,	0	33	. . .
" 24,	. . .	26	200
" 25,	. . .	22	167
" 26,	. . .	17	81
" 27,	. . .	12	171

The disease is said to have appeared in Sumatara, but the report lacks confirmation.

The Yellow Fever at Pensacola.—Two new cases of yellow fever have been reported at the Navy Yard. Surgeon Owen died on August 22, and his wife on the 27th, and on the same day their second daughter was stricken down with the disease.

Passed Assistant Surgeon Guiteras has volunteered for duty at the Yard, and has already arrived there.

The house to house inspection at Pensacola, ordered by Surgeon-General Hamilton, resulted in the discovering of two cases of supposed yellow fever in a sailor's boarding-house on Palafox Street wharf, which were removed to the Quarantine Hospital on Santa Rosa Island, where one of the cases died on the same evening. On post-mortem examination, the disease proved not to be yellow fever. The house and contents were destroyed, and the premises were surrounded by a guard. The men proved to be deserters from the bark Dogmar from Limerick, which arrived at Pensacola on the 17th, after three weeks spent up the Bay. The Dogmar brought a clean bill of health. Surgeon Murray, under date of August 23, reports these cases as malarial rheumatism.

A cordon has been established around the city, which is seven miles from the Navy Yard.

Origin of the Cholera at Damietta.—A very interesting report has been published by Chaffey Bey as to the origin of the outbreak at Damietta. After a careful analysis of all the circumstances of the case, he arrives at the conclusion that the cholera was not imported, but broke out spontaneously on account of the condition of the river and city, which this year presented conditions similar to those found on the banks of the Ganges when the epidemic made its appearance. The great fair at Damietta attracted a crowd of 15,000 people, who for eight days lived on foul water and decayed fish.

The German Cholera Commission.—The commission, of which Dr. R. Koch is President, nominated by the German Government to study the nature of the cholera outbreak in Egypt, sailed for Alexandria on the 16th of August.

Cholera Precautions in Paris.—In his report to the Conseil d'Hygiene, Dr. Dujardin-Beaumetz recommends, as preventive measures in case of an outbreak of cholera, that solutions of sulphate of copper and zinc, and especially chloride of zinc, be used for the disinfection of clothing and bed-linen. During the course of the disease the patient should be isolated; curtains, carpets, and hangings should be removed, and thoroughly disinfected with a solution of these salts (℥viss–Oj). After the room has been emptied, a fire should be built, and the room thoroughly disinfected—burning charcoal containing ℥v of sulphur for each cubic yard of the room. The room should be tightly closed for twenty-four hours, after which it must be ventilated for one week before use.—*L'Union Méd.*, August 9, 1883.

Personal Precautions against Cholera.—M. Pasteur, according to *Le Temps*, has formulated the following instructions for the personal protection of the members of the French Commission which has gone to Egypt to study the cholera outbreak.

These instructions are instituted on the hypothesis, which he considers very probable, if not certain, that cholera does not enter the human organism by the air-passages, but that it does so only by the digestive canal, unless under very exceptional circumstances: 1. Not to make use of the drinking water of the locality in which the mission will be located without having previously boiled the water, and shaken it well, after it has become cold, for two or three minutes, in a bottle half filled; or the water may be put into vessels previously heated, "vases flambés,"—that is to say, vessels that had been subjected to air heated to about 300° Fah. or even more, the higher the temperature the better. The natural mineral waters may be employed with advantage instead. 2. Make use of wine that has been heated in bottles to about 135° Fah., and which should be drunk in glasses also previously heated. 3. To make use of alimentary substances only after being well cooked, and fruits in their natural state, but previously washed with water that had been boiled, and preserved in the same vessels in which it was boiled, or had been transferred into those previously heated. 4. To make use of bread cut up into thin slices and submitted to a temperature of about 300° Fah., during twenty minutes or more. 5. All the vessels employed for alimentary purposes should also be previously subjected to a temperature of 300° Fah. or more. The bed-linen and towels should be plunged into boiling water, and then dried. 7. The water for washing or bathing should be previously boiled, and, after being cooled, mixed with solutions of thymic or of carbolic acid, the former in the proportion of 1 to 500 parts, and the latter 1 to 50 parts. 8. The hands and face should be washed frequently during the day with boiled water, and to which should be added solutions of thymic and carbolic acid. 9. It is only in cases where the bodies of patients who have died from cholera or their soiled linen has to be handled that it would be necessary to cover the mouth and nostrils with a small mask formed of two pieces of thin plates of metal, enclosing between them a little cotton-wool of not more than one centimetre thickness, the mask having been submitted to 300° Fah. only, and renewing the temperature of 300° on each fresh exposure to contagion.—*Gaz. Hebdom.*, August 10, 1883.

State Medical Society of Wisconsin.—The State Medical Society of Wisconsin will hold an adjourned session at the Court House in the city of Milwaukee, commencing on Tuesday, September 4, 1883, at eight o'clock P.M. This meeting is to take the place of the regular annual session, which, without the transaction of any general business, and at the request of several members, was adjourned to the above-named date.

As the President, Dr. T. P. Russell, is now absent in Europe, there will be no Presidential address.

It is expected that an unusual amount of time will be devoted to the discussion of medical topics, and by vote of the last session of the Society, the subject of the paper then presented by Dr. Senn, to wit—"the Pathology and Morbid Anatomy of Tubercle"—was made a special order for discussion at this meeting.

Another subject of special interest, and one which, it is anticipated, will be the subject of profitable discussion, is presented in the resolution by which the Committee on Pathology was instructed to inquire into "the possibility of relationship and causation of erysipelas, diphtheria, and puerperal fever."

The Chicago and Northwestern, the Milwaukee and St. Paul, the Wisconsin Central, the Milwaukee and Northern, and the Milwaukee, Lake Shore and Western Railroads will return members who have paid full fare over their own roads, in going to Milwaukee, for one-fifth of the usual rate, on presentation of certificate of attendance, which will be furnished by the Secretary.

The Lehigh Valley Medical Association.—The third annual meeting of this Society was held at Easton on August 15th. The President, Dr. Traill Green, delivered an address on "The Doctor of the Olden Time," and Dr. C. K. Mills, of Philadelphia, by invitation, read an interesting paper on hysteria.

Dr. R. Leonard, of Carbon, was elected President for the ensuing year.

Smallpox in New Orleans.—There were nineteen deaths in New Orleans from smallpox for the week ending August 18th.

Havard Medical School.—It is announced that Dr. Calvin Ellis has resigned the Deanship of the Harvard Medical School, and that Dr. H. P. Bowditch has been elected his successor.

Sir William MacCormac sailed from Liverpool on the 23d ult. on a brief visit to this country.

The Garfield Memorial Hospital.—A statement has recently been published to the effect that the plan of establishing a Garfield Memorial Hospital in Washington City had been abandoned for lack of support and that the money thus far contributed for that purpose will be turned over to the Garfield Monument Fund. Mr. Thomas Fisher, of the Garfield Hospital Board, states that the report of the abandonment of the hospital scheme was entirely without foundation.

On the contrary, the Board has purchased the L. H. Schneider property, at the head of Tenth Street, on the elevation overlooking the city, for $38,000, and obtained possession of it on August 1st. There is a fine double brick house on the place, with out buildings and nearly seven acres of ground. It is the intention of the Board to begin the erection of a wing to the house, to cost $15,000, and Dr. J. S. Billings will superintend the work. The hospital will be open for the reception of patients soon. The Board has the money in bank to pay for these improvements, and is in earnest about this matter.

The Date of Expiration of the Term of Service of the Surgeon-General of the Navy in Dispute.—A Washington telegram to the *Tribune* states that in 1879 there was a vacancy in the office of Surgeon-General and Chief of the Bureau of Medicine and Surgery in the Navy, which was filled by the selection of Medical Inspector Philip S. Wales, who was appointed Surgeon-General on August 1, 1879. The appointment was bitterly opposed by several surgeons who were Dr. Wales' senior in rank, and they waged war against his confirmation by the Senate. They were defeated, and on January 20, 1880, Dr. Wales received his commission for four years. The present aspirants for the place, who comprise all the medical officers of the Navy senior to Dr. Wales, contend that his term expired on August 1, four years from the date of his original appointment, and that all official acts performed by him since that date are illegal. Surgeon-General Wales insists that, unless sooner removed by the President, his term of office will not expire until January 20, 1884, four years from the date of his commission. He is a candidate for reappointment.

There is some talk of an effort to have the question as to when Dr. Wales' term expires referred to the Attorney-General for his opinion, inasmuch as this is the first controversy of the sort that has ever arisen in the naval service.

The Composition of Hostetter's Bitters.—Internal Revenue Commissioner Evans has sent a circular to all collectors and revenue agents, inclosing a copy of his letter to Hostetter & Smith, respecting the "bitters" made and sold by them. In part the circular reads as follows: "The analysis of the compound shows it to be made of a very strong alcoholic liquor, and very little else—so little of anything else that information received at this office leads to the belief that it is now being sold very extensively as an alcoholic beverage, and that efforts are being made to evade the law requiring payment of the tax due the United States from retail liquor dealers. These facts, and especially the analysis of the bitters, which itself justifies very great suspicion, lead me to enjoin the utmost vigilance upon all revenue officers, so that no one liable for the tax shall escape its payment by any evasion or false pretence whatever. It may also be added that the terms of the letter to Messrs. Hostetter & Smith are applicable to the case of every other preparation of a like alcoholic character, and especially where there are grounds for strong suspicion that distilled spirits are sold under the guise of a medicine.

Health in Michigan.—Reports to the State Board of Health for the week ending August 18, 1883, indicate that tonsillitis, cholera infantum, and bronchitis have increased in area of prevalence.

Including reports by regular observers and by others, diphtheria was reported present during the week ending August 18, and since, at eighteen places, scarlet fever at twelve places, and measles at nine places.

Hay fever is now quite prevalent, ragweed beginning to blossom August 17.

The correspondent at Hudson reports an unusual tendency, for that locality, to congestion and irritation of nerve-centres and the meninges of the spinal cord and brain.

Obituary Record.—Died in Paris, on August 5th, Prof. Parrot, at the age of 59 years. Receiving his degree of Doctor in Medicine in 1857, he rapidly rose to Agrégé de Faculté in 1860, Physician to the hospitals in 1862, Professor of the Faculty in 1876, Member of the Academy in 1878, and Physician in Chief of the Legion of Honor in 1879.

—— Our Italian exchanges record the death, in Florence, of Dr. Filippo Pacini, Professor of Topograghical and Microscopical Anatomy, at the age of 61 years. He was the discoverer of the corpuscles which bear his name.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM AUGUST 20 TO AUGUST 27, 1883.

Clements, Bennett A., *Major and Surgeon.*—Relieved from duty with the Army Medical Examining Board, New York City, N. Y.—*Par. 11, S. O. 193, A. G. O., August* 22, 1883.

Middleton, J. V. D., *Major and Surgeon.*—Relieved from duty at Fort Hays. Kansas, and assigned to duty at Fort Leavenworth, Kansas.—*Par. 2, S. O. 169, Department of the Missouri, August* 18, 1883.

Williams, John W., *Major and Surgeon.*—Granted leave of absence for one month on Surgeon's certificate of disability.—*Par. 1, S. O. 109, Department of the Columbia, August* 8, 1883.

Bartholf, John H., *Captain and Assistant Surgeon.*—Assigned to temporary duty at Vancouver Barracks, W. T.—*Par. 2, S. O. 109, Department of the Columbia, August* 8, 1883.

Finley, J. A., *Captain and Assistant Surgeon.*—Relieved from duty at Fort Concho, Texas, and assigned to duty at Fort Stockton, Texas, as Post Surgeon.—*Par. 1, S. O. 101, Department of Texas, August* 16, 1883.

Kimball, James P., *Captain and Assistant Surgeon.*—Relieved from duty in Department of the Platte, and to proceed to New York City, and report in person to the President of the Army Medical Examining Board, for duty as a member of that Board, *vice* Surgeon Clements, relieved.—*Par. 11, S. O. 193, A. G. O., August* 22, 1883.

The Medical News *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the News *should be addressed to No. 1004 Walnut Street, Philadelphia.*

THE MEDICAL NEWS.

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ORIGINAL LECTURES.

SOME DISEASES OF THE FEMALE ORGANS OF GENERATION, CHARACTERIZED BY NEW GROWTHS.

A Clinical Lecture, delivered at the Long Island College Hospital, Brooklyn, N. Y.

BY ALEXANDER J. C. SKENE, M.D.,

SURGEON TO THE HOSPITAL, AND PROFESSOR OF GYNÆCOLOGY IN THE LONG ISLAND COLLEGE HOSPITAL, BROOKLYN, N. Y.

(Reported by EDWARD DEVELIN, M.D.)

GENTLEMEN: To-day I call your attention more especially to *disease* of the female organs of generation, characterized by those neoplasms which often result so seriously to the patient, frequently terminating in death, but more generally in chronic disease and inability to continue their normal functions. I desire to call your attention to these diseases and conditions, that you may the more readily recognize them in the incipient stage, and apply such means for their relief as may result most satisfactorily both to the patient and to you as medical men.

OVARIAN TUMOR.

This woman came to me ten months ago; she then presented the same outlines as she does now, but with this difference, that at that time her general appearance was much better than it is now. She was then in good flesh, with rosy cheeks, and was not emaciated as she now is. You observe here the enormous distention of the abdomen; but, apart from this, at that time she had all the appearances of being a strong, vigorous woman.

At that time we made a diagnosis, and relieved her of this enormous distention of the abdomen, removing seventeen quarts of fluid, of a chocolate consistency, from this abdominal tumor with which she is afflicted. I desire you to specially notice this patient, as she gives the physiognomy of her disease, and which is described in our books as the facial expression of ovarian disease.

After the fluid was withdrawn, she was quite comfortable, and returned to her home, until four months ago, when she again presented herself in the same condition as before. The tumor was again aspirated, and somewhere in the neighborhood of the same quantity of fluid removed as previously. She was then allowed to return home, and to-day returns with this enormously distended abdomen precisely the same as upon the two previous occasions.

This patient cannot lie down without great distress, and you observe, as she is now sitting in an ordinary chair, that the tumor is so immense that it projects beyond the knees. We will, however, place her in the recumbent position, and you now notice that there is no adipose tissue upon the abdominal walls; we also find flatness at all points of this distended abdomen; it is also irregular in its outline; I cannot flatten or displace this abdomen by pressure while she is lying here as I could if it were a free fluid, simply because it is fluid in a cyst, distended until its walls are tense. There is no difficulty here in obtaining diametric fluctuation. I tap lightly upon this left side; there is no difficulty in detecting the wave upon the opposite side; so we have it with peripheral percussion.

The point is to make out if this fluid is encysted; this we can easily accomplish. Now I get clear peripheral fluctuation all around except upon the left side, and I find at this point that it is semi-solid and irregular. On making a vaginal examination, I find also in the cul-de-sac of Douglas a solid mass which belongs to this growth within the abdominal cavity. We notice also upon the abdomen that the vessels, insisting upon their privileges, have made deep furrows in the abdominal walls, this enlargement of the veins being entirely owing to the pressure brought to bear upon them. As I pass my hand lower down, I also come to a solid mass; and here you will observe that the distance from the symphyses pubes to the umbilicus is much shorter than normal. Now the question probably which occurs to you is: If I made my diagnosis of this case a year ago, why did I not remove this tumor? That is the only proper treatment for ovarian tumor. I will state that I did not deem it expedient to remove it for what appeared to me to be good reasons, although at that time she was in much better condition than she is now. I do not understand how such patients can carry these enormous tumors with the facility that they do. Keith removed a tumor weighing one hundred and twelve pounds, when the entire weight of the woman previous to its removal was only one hundred and eighty-seven pounds, so that in his case he literally removed the woman from the tumor, as his friends laughingly remarked. In this case before you, however, it was not the size of the tumor of which I was afraid; you notice that the umbilicus is low down, and I presumed from that that the solid portion of the tumor which was in the pelvis had formed adhesions to the bladder, uterus, and abdominal walls, showing that these parts would not yield, and that those above had been overcome by these adhesions and dragged down. I obtained further evidence that there were adhesions with the bladder and uterus, because, in passing the sound into these organs, I found that they were immovable. This told me it would be extremely difficult to remove this tumor, even if it were possible. More than that, I found that this solid mass, high up on the left side, was adherent probably to the stomach and diaphragm. As I made pressure, the fluid could be displaced downwards, but at this point the solid mass was immovable.

Now if there are no adhesions in these tumors, you can slide them up or down in the abdominal cavity; but in this case I could not do so. I therefore thought it best to first aspirate, and by this means determine the relation of these adhesions. The fluid was accordingly withdrawn, and we then found a solid mass adherent to the diaphragm upon this left side, and, when the abdominal walls were relaxed, I could distinctly feel this solid mass as being part of the cyst. I thought at first that it might be an enlarged spleen which was pushed forward by the tumor, but I found it was a part of the tumor itself. This growth, then, was adherent to the diaphragm, and also to all the pelvic organs.

What the solid portion in the pelvis is I do not positively know; it may be fibrous, or composed of little cysts, and above, I presume, we have the same condition of things. It does not present the characteristics of the spleen, liver, or stomach, or anything that might be looked for in that part of the abdomen, and from this I judge it to be a mass of small cysts. Had this growth not been adherent so extensively, I could have removed it; but with these adhesions I had not the courage to operate, as I was almost sure I should fail. Not necessarily, however, for we have cases on record in which the tumor has been adherent to the liver and stomach, and yet the patients made a good recovery after the operation. There are some of Keith's cases (and if I did not know the man so well, I should almost doubt it) which have been recorded by others in which such operations have been eminently successful. But then he is the surgeon of surgeons in ovariotomy, and can do more in less time than any other man; his knowledge and power to deal with these cases are wonderful. He might perhaps have operated in this case, but I would prefer not to. I told the patient how she was situated, and she thought if I could relieve her for a few months more, to look after her family, she would prefer to do so than run the risk of an operation; she was therefore aspirated as desired.

But even in mild cases this tapping involves danger, so that I am sometimes unwilling to do it, as patients have died from it. They do not die so often now, because the aspirator can be used with less danger than the original method of tapping, the fluid being less liable to escape into the cavity of the peritoneum as the operation is now performed. I believe in this case the cyst-wall also was adherent to the abdominal walls. There is, however, always danger of exciting peritonitis, and we only tap where the diagnosis is very doubtful.

While the diagnosis was not doubtful here, it was very doubtful as regards the extent and character of the adhesions, and I had no other method of satisfying myself but by tapping in order to discover these adhesions high up on the side and also in the pelvis. In this case, the operation was very satisfactory; but it must be remembered that every time you tap your patient, you render the possibility of operating upon them by ovariotomy more difficult. Lawson Tait has brought this out very well indeed. His theory is that you exhaust the patient by repeated tappings; you take away this enormous quantity of fluid, which is reproduced at the expense of the normal constituents of the blood; and hence when you perform ovariotomy your patient is in no condition to recover, even if you escape peritonitis. They die, he says, of asthenia.

In this case, we can give this woman relief for a few months more of her remaining life, but that is all. Had we chanced to see her in the earlier stages of her difficulty, we might have been able to save her; but as it now is, this tumor is simply crowding her out of existence. The question may then arise, Is it not better to operate in cases of this kind, with hopes of a permanent cure, than to allow them to live a few months longer, with the knowledge that death must inevitably result from their disease? This is an extremely difficult question to answer, as the patient may not be willing to run the risk of an operation, even if you are to perform one.

SUBPERITONEAL FIBROID OF UTERUS.

This patient is thirty-seven years of age, and has been married seventeen years. Ten years ago she came to me in the dispensary. I then proposed an examination, when she suddenly fainted, and on reviving she stated that she often had these attacks. She has had no children. She has had three miscarriages, one at five months, one at three months, and one at three and a half months; the last was ten years ago, after which time she came under my care. A few points in her history which I remember now are these: one being pelvic peritonitis, which she had some time ago, the result of exposure; at another time she threatened to develop tuberculosis—threatened, I say, because she had a circumscribed bronchitis at the apex of the left lung, and I believe that is considered rather a forerunner of tuberculous deposit, and with this a peculiar disposition to miscarriage, with occasional attacks of menorrhagia, with pelvic tenesmus and backache, she has lived a half-sick, half-well kind of life. She has menstruated irregularly, and quite often profusely, at one time having menorrhagia for two months. We might say of this patient that she has had something of a slight menorrhagia, at times pronounced, at other times not marked, but on the whole a disposition to hemorrhage; that she has had an attack of pelvic peritonitis, that she has all along had a great deal of pelvic pain, so that she has never been equal to ordinary locomotion; walking, standing, or sitting, for a long time past, has given her a good deal of trouble.

Now we will endeavor to ascertain what the pathological conditions are which give rise to this history. Her miscarriages have been involuntary. We sometimes find patients who have a history of a number of miscarriages; but upon investigation we find that they have been caused by the patient herself or some companion in iniquity; but in this case it was due to the organization. I will give you the physical signs in a moment. I might say now that I find the uterus high up, the os far back in the left side, so that I can reach very little of the uterus in the pelvic cavity. Now here we have an abdomen that is symmetrically developed apparently, a little fuller perhaps on the left side; this abdomen presents nothing unusual to a patient who has much adipose tissue, but in this case it is out of proportion to the rest of the body. An abdomen of this size, at thirty or forty years of age, is nothing if it corresponds with the rest of the body. In this case it does not. We will now see how much of this is adipose tissue; to decide this we raise up a fold of the abdominal wall between our hands, and measure the thickness of the fold we thus retain. In this case it is four inches; now divide this by two, and it gives us two inches, which is the thickness of the adipose tissue upon the abdominal walls of our patient.

Now I find in the region below the umbilicus an area of dulness or flatness, but above this we get the tympanitic resonance. Now besides this amount of adipose tissue, there is something else here which gives this flatness on percussion, and as I follow this around, and compress the adipose tissue, I come to a solid mass. In this region here I get flatness on percussion and a mass solid to the touch. Let us see if it is fluid; perhaps it is not solid. I find here not the slightest diametrical fluctuation; I get no wave. Let me try if I can get it with peripheral percussion, taking a small section; I do not. Let us see if I get displacement; I can displace the whole mass. Now if it was fluid, I would displace it upward or downward by pressure; but this I cannot do. I get motion of this entire mass to a very limited extent; so I have all the physical signs of solidity, or a solid tumor. So much is adipose tissue (grasping the adipose tissue in his hand), the rest is solid material. This gives you an idea of the size of this neoplasm.

Now from these physical signs I am well satisfied that this is a solid mass. There is one source of error, not marked in this case, however, and that is the apparent fluctuation of adipose tissue. This differs according to the character of the tissue; it may be almost solid, or of a jelly-like consistency, depending upon the proper amount of the elements which make up this adipose tissue. Sometimes it is so soft and yielding that it fluctuates; this puzzles us sometimes. Just bear in mind the physical signs here, and I think you will be perfectly safe in saying that this is solid material, or, if not solid, a semi-solid material, within a very dense cyst-wall. We occasionally have a thick cyst-wall containing a gelatinous material, so that the whole mass gives us all the signs of solidity; it does not fluctuate, does not yield to pressure; these, however, are very rare cases. Even in the ovarian cysts, where the contents are gelatinous and thick as glue, you will get this sense of fluctuation. In the fibro-cyst we often get that motion which simulates fluctuation so clearly that we are inclined to diagnosticate fluid when it is semisolid. Apart from these conditions, I know of nothing in the list of abdominal tumors that would be likely to deceive us.

There is, however, one other condition that would give us some of the physical signs that we have here. When I find a symmetrically developed abdomen, the question arises whether we have a pregnant uterus; for the physical signs obtained by the vaginal touch may leave us in doubt about that. The uterus in this case has entirely escaped from the pelvis, except a small portion. This, you know, is the condition in the later months of pregnancy,,and the question arises whether we have a pregnant uterus, or an enlargement of the organ from some neoplasm which produces the same physical signs. Here, in this case, we find an inelasticity about this which rather argues against gestation; almost always the pregnant uterus will yield to pressure, and sometimes after manipulating for a time, the walls of the uterus will contract; then it simulates the tense cyst or solid tumor, so that you get neither elasticity nor fluctuation. This alone, however, would not be sufficient to exclude pregnancy. The character of the cervix in this case argues against it, as it is very small; it is not enlarged and soft, like the pregnant cervix. Again, this woman has none of the signs of fœtal motion or fœtal heart-sounds, nor changes of the mammary glands. Dr. Stewart has excluded this, and I will not dwell upon this peculiarity. Then we come to the next question, What is this tumor? It is evidently connected with the uterus, as the uterus is displaced, and the cervix moves when we move the mass in the abdomen. It looks as though the tumor was on one side, and the uterus on the other, so that we have a right lateral version of the uterus, the cervix pointing a little towards the left side. When you place her on the left side, the tumor comes nearer to the normal axis of the uterus; that is a very good point in evidence of this right lateral version of the organ—fundus to the right, cervix to the left.

Now, I have but very little doubt in my mind that this is a large fibroid growth projecting from the left wall of the uterus; I believe that, because six or eight years ago I was able to make out that she had a fibroid growth, and her subsequent history agrees with the present physical signs. It has increased enormously since then, as it now extends beyond the umbilicus.

I have mentioned to you before, that of these fibroids of the uterus we have three varieties; not that the pathology of the growth changes at all: they are all alike in their hystological composition, but differ in their location. It is important to bear in mind the varieties in regard to location, as each one behaves differently. I represent upon the blackboard the uterus, composed of three sections or layers of tissue, the three colored chalks representing these as follows: from within outwards, first, the mucous membrane of the uterus, next its muscular tissue, and finally its peritoneal covering; we find the fibroid growth in this case just beneath the peritoneum; this, then, is a subperitoneal fibroid of the uterus. When the growth occurs beneath the mucous membrane, it is called submucous. The third variety is a growth within the walls of the uterus, and is called an interstitial fibroid of the uterus, because it grows in the muscular walls of the organ itself.

Here, then, we have the three varieties according to location. Now, as I have before remarked, each one behaves differently. The first one, the submucous, increases the size of the cavity of the uterus; the menstruation then becomes excessive, because you have more surface to menstruate and an increased vascularity, hence we have no affection short of malignant disease which gives the same amount of hemorrhage as this. Some authors have called this the bleeding disease of the uterus, it being so excessive sometimes that the life of the patient is threatened from loss of blood. This patient has sometimes had metrorrhagia, but it has not been excessive more than once in her whole sickness, she then having two months of constant though slight oozing.

Now, in the second or subperitoneal variety, the growth being away from the cavity of the uterus does not give rise to this hemorrhage to the same extent; the interstitial variety then holds a position between the two in regard to hemorrhage. There is much difference, you observe, between the history of each. Each history, then, aids us in making our diagnosis, and hence you cannot fail to appreciate the importance of the history in these cases. In a case like this, the menorrhagia has been so slight that it is almost certain the tumor is not submucous. There are physical signs which enable us to diagnosticate the location of the tumor. Sometimes these subperitoneal fibroids become pedunculated, and we can move them around within the peritoneal cavity, and demonstrate their attachment to the uterus.

Again, if the tumor projects from the outer surface of the uterus as a distinct nodule, it is a sign of its being subperitoneal. In using the uterine probe, if we find that the cavity of the uterus is straight, but largely on one side of the tumor, it proves that the tumor is subperitoneal or interstitial, with a marked tendency to extend outwards. On the other hand, if the canal of the uterus is deflected in a marked degree, the fact points to the tumor being submucous. If the tumor projects into the cavity of the uterus, so that the sound can be passed partially around, it is clear evidence that the tumor is submucous, and tending to become intra-uterine and pedunculated.

The modes of treating these fibroids may be briefly stated as follows: By ergot, electrolysis, enucleation, removal of the ovaries, and finally removal of the tumor, uterus, ovaries, and Fallopian tubes. Ergot gives its best results in the submucous varieties. Enucleation is employed only in the submucous tumors, when they are well within the grasp of the uterine walls, and low enough down to be easily reached. Removal of the ovaries is called for in cases which cannot be managed by the other means mentioned, and the same may be said of the two remaining methods.

FATTY ABDOMEN.

Our next case, although not coming under this class of disease, illustrates so well the liability to error in diagnosis of abdominal tumors that I now present her to you that you may especially note the condition and appearance of one of these large fatty abdomens, as simulating disease of the ovaries or uterus.

This patient is thirty-seven years of age, has been married thirteen years, and is the mother of four children. She has menstruated regularly until three years ago, and to-day presents herself to us with an abdominal enlargement, which brings her here to obtain counsel.

You will observe that the abdomen is symmetrically enlarged; there is no irregularity about it. We will now proceed to examine the patient as in the former case. It is always advisable to first make out how much adipose tissue there is upon the abdominal walls; this I have already instructed you how to determine. In this case, as you observe, if we were to remove all of the adipose tissue, there would be very little enlargement left compared to it now. We now desire to find out if there is any fluid. In this case the abdomen flattens when the patient lies upon the back; that occurs in hydroperitoneum, if the accumulation of fluid is small. Now if there is any fluid, it will be dull on percussion at the most dependent parts. The intestines would float upon the fluid, and give resonance on percussion, but not so below, at the sides of the abdomen; and here, you will observe, we get this dulness on both sides. Now, above here, we do not get a clear tympanitic resonance; but let us compare it with another that is flat or non-resonant on percussion, and you will note the difference. There appears to be a little dulness, but I believe it is due to a loaded colon. In this case we get no diametric wave on palpation, but we get an adipose wave; this is a mere surface-wave; it is not the fluctuating wave within the abdominal cavity which fluid gives. If we were to remove this adipose tissue and empty the colon, we would have an abdomen of normal size.

There is, however, one difficulty in the diagnosis of abdominal tumors that I have not been able to illustrate to you, and it is the most difficult to diagnosticate; it is that condition in which the omentum becomes enormously loaded with fat, sometimes called fatty omentum. In such cases you have evidence of fat in the walls of the abdomen, but it is not enough to account for the enlargement of the abdomen, and you can only make your diagnosis by the tympanitic resonance underneath at the sides of the abdomen; you form your diagnosis by exclusion of hydroperitoneum, ovarian cysts, etc. So you see that, while it is easy to measure the fat of the abdominal walls, it is not so easy to discover the amount of fatty tissue that may be lodged in the omentum. Fortunately this fatty omentum is rather rare, and there are not many cases that have such an amount of fat as to interfere with our diagnosis. The point of interest in this case is that it gives us an opportunity of applying the rule of exclusion in diagnosis. Sometimes, when you have a case in which there are no prominent symptoms or signs, nothing that you can lay your eye or hand upon, and yet in which there is certainly some pathological condition present, you can practise exclusion until you get down to the only thing that it can be. We tell what a thing is, sometimes, by first discovering what it is not. The diagnosis in this case is enlargement of the abdomen from fat and feces. The one can be disposed of by cathartics, the other by proper diet and exercise.

FIBRO-CYST AND SEPTIC CACHEXIA.

This patient I saw at my office a week ago, and I would very much like to have shown her to you at that time; this case is an extremely interesting one. She has that dull, pale, cadaverous look, and is extremely emaciated; in short, she has a cachectic appearance. Now, bear in mind the difference between diathesis and cachexia; the one is a latent tendency, and the other is an evidence of active disease.

The skin in this case has a peculiar, dry, ill-conditioned appearance; she has, then, evidence of some disease belonging to the class of degenerations. Now, upon examination, I find the uterus entirely out of the pelvis; I can just reach the external os, just beyond the superior strait, but I find a mass which occupies this lower zone of the abdomen, extending above and to the right of the umbilicus. I find also that this mass involves the uterus, for I can toss it up between my hands very readily. At the upper portion, it has a little elasticity; and I am inclined to think from her appearance that we have here a cysto-sarcoma of the uterus, which has been developed within the past two years, during which time she has been troubled with menorrhagia.

It is possible that I may have made a mistake, and that this growth commenced as a sarcomatous disease of the ovaries, and then grew around the uterus. About this, however, I am not positive, but I am satisfied that this is not a simple fibroid of the uterus; neither do I think it is a fibroid cyst, for at this stage they do not give rise to this cachectic appearance. This appearance, however, may be due to renal disease, or she may be a malarial subject; I am inclined, however, to believe that this is a growth from the uterus, with a malignant tendency. The point of interest to which I would draw your attention is this cachectic appearance, so characteristic of malignant disease.

We will place this patient upon the arsenical treatment for two reasons: if it is malaria, this treatment is in order; if also her disease be malignant, it is then good treatment. I would advise the use of Fowler's solution with good tonic treatment. Sometimes we can adjust our therapeutic agents when our ideas of the pathology are somewhat cloudy; we will therefore place the patient on this arsenical treatment, although I am in some doubt as to the nature of this growth.

My diagnosis is not complete in this case, and it teaches you an important lesson—viz., we are not always bound to make a positive diagnosis. The best diagnosticians are those who watch carefully their case, and then make their diagnosis subsequently: it is far better to hesitate if you have not the means of being positive. We should do as they do in law; leave room for an honorable escape if possible.

(*To be concluded.*)

ORIGINAL ARTICLES.

REMARKS UPON THE USE OF IODOFORM AS A WOUND-DRESSING,

WITH A REPORT OF CASES IN WHICH IT WAS USED.[1]

By J. EDWIN MICHAEL, M.D.,
PROFESSOR OF ANATOMY AND CLINICAL SURGERY IN THE UNIVERSITY OF MARYLAND; CONSULTING SURGEON TO THE BALTIMORE PRESBYTERIAN EYE AND EAR CHARITY HOSPITAL.

Ever since it has been known that putrefactive changes in wounds and the consequent deleterious effects on patients are due to the presence and activity of micro-organisms, it has been the aim of surgeons to procure a wound-dressing capable of preventing the presence, or destroying the vitality of these intruders. For the last fifteen or twenty years, surgical literature has been replete with suggestions and discussions relating to this subject, and although we cannot be said to have arrived at a conclusion even yet, sufficient advance has been made to revolutionize surgical procedure in many respects.

Listerism has gained many votaries in all civilized communities. It is true that many who once practised it have given it up on account of the cumbersome and complicated technique which its use entails. But the fundamental principle upon which it is based is acknowledged by all, if not in words, in the careful practice of what is couched under the specious term, "cleanliness." Moreover, carbolic acid was found to be a poison, even when applied to wounds, and had the additional drawback of irritating the surfaces with which it came in contact. Other substances were brought into requisition. Thiersch introduced salicylic acid, and demonstrated its value as a germ-destroyer. Volkman advanced the claims of thymol, and met with much success in its use. Other surgeons introduced other substances, and naphthaline, corrosive sublimate, iodoform, bismuth, and other antiseptics have their advocates.

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[1] Read by invitation before the Cecil County Medical Society, July 11, 1883.

We aim at perfection, though we may never reach it, and the voices of those who sound the praises of the new discoveries scarcely die away before the warning cries of the critics who discover inefficiency or danger fill the air. But experience in this, as well as in other matters, must be our guide, and we may hope that, in the contest for supremacy, we may at least learn what is best, even if we may not reach perfection.

Being prepared to contribute my mite to the general fund, I have made some experimental study of one of these agents—viz., iodoform—and propose in this paper to give some account of its introduction into surgical practice; its use by others, and to lay before you the results of my own experience with it.

The physical properties and chemical nature of iodoform are sufficiently well known to make any reference to them unnecessary. It has been used in medicine for a number of years as a valuable remedy in certain forms of syphilis and tuberculosis, and it has received deservedly high praise as a local application to ulcers, venereal and simple, and to certain conditions in eye, ear, and throat disease. It was, in fact, its efficacy in checking certain tuberculous processes which led to its introduction as a wound-dressing. Prof. von Mosetig,[1] Moorhof, in Vienna, to whom the credit of its introduction is due, first used the drug in the treatment of fungosities in tuberculous joint-disease, and was struck not only with the manner in which it controlled the fungous process, but also with certain other peculiarities. He observed that in cases in which it was used, it acted as a local anodyne; that the wounds remained perfectly sweet, and that the discharge was reduced to a minimum. This led to the conclusion that iodoform would be a practical and convenient substitute for Listerism, and von Mosetig began to use it in dressing ordinary operative wounds.

After a long course of experimentation, he announced his discovery to the world, and expressed the most enthusiastic admiration for the antiseptic virtues of iodoform. He says: "In the light of my former experience, collected with great care and accuracy, I do not hesitate to say that not only is iodoform a safe specific against local tuberculosis, but also that it acts as an antiseptic in non-fungous surgical lesions, and accordingly deserves a very prominent place among the antiseptics so far known."

After nearly three years' experience, Prof. v. Mosetig comes to the following twelve conclusions. As the first and second relate exclusively to tuberculous fungosities, they will be omitted.

3. For non-fungous wounds, iodoform has shown itself the safest antiseptic, since, on account of its difficult solubility in the tissue-fluids, it remains long in the wound, and develops a continuous antiseptic action.

4. Iodoform locally applied in moderate quantity is not dangerous to the organism, although it is in part absorbed, and eliminated by the kidneys; indeed, in many diseased organisms, this transient presence of the drug in the circulation may be of great use.

5. The immediate action of iodoform in fresh wounds is anæsthetic; later it promotes granulation, and absolutely prevents all septic trouble in the wound.

6. The progress of the wound is most frequently afebrile; sometimes, however, there is exalted evening temperature, though not of septic character, for the first few days. Iodoform sprinkled between wound-surfaces does not prevent healing by first intention.

7. In iodoform dressing, as in all other methods, a way must be provided for the escape of the wound secretion. The soaking of secretions through the dressing does not alter its antiseptic character; only elevation of temperature in the further progress of the wound, which points to retention of secretion, absolutely demands change of dressing for inspection of the wound. Where there are no febrile symptoms (except in the first few days), soaking of the secretions through the dressing indicates a change for the sake of cleanliness only.

8. Traumatic erysipelas with iodoform dressing is very rare; when it occurs, retention of secretion is the cause.

9. Iodoform is so potent an antiseptic that the simultaneous use of any other is unnecessary. For washing the wound, therefore, clean water is all that is necessary; and the use of antiseptic solutions, such as carbolic, boracic, and salicylic washes, although useful, are not absolutely necessary. Cleanness of the part operated upon, of the instruments, and of the hands of the operator and assistants are self-evident requirements, as also gentleness of manipulation and quiet of the operated part.

10. Iodoform dressing is the cheapest, safest, most permanent, and easiest applied of all the hitherto known antiseptic dressings. The materials for the dressing can be found anywhere, and the iodoform powder, as well as the iodoform gauze, may be kept for years without losing any of its virtues.

11. Iodoform allows the use of the antiseptic process after operations in the mouth, in or near the rectum and bladder. surgical procedures in regard to which a thought of complete antisepsis could heretofore scarcely have been entertained.

12. The deodorization of iodoform by Tonka bean allows its use even upon individuals very sensitive to its odor.

Encouraged by the success of von Mosetig,

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[1] Wiener med. Woch., 1880, xxx., 1173, 1202, 1254, 1340, 1392.

Mikulicz, and Wölfler, Billroth's assistants, Gussenbauer, Leisrink, and many others began to use iodoform dressing, and were rewarded by astonishingly brilliant results.

Mikulicz[1] reports the results reached in the immense clinic of Prof. Billroth as follows: "Of fifty-three great wounds, forty-nine pursued an aseptic course. There were but two cases of erysipelas, one in a person who had cheesy glands removed, the other in a case of cancerous infiltration. Innumerable small operations, nerve-stretching, etc., healed mostly *per primam.* The conclusions which Mikulicz reaches are, if possible, more favorable than those of von Mosetig, though set forth more briefly.

1. For all conditions in which the direct application of an antiseptic to a wound-surface is indicated, iodoform is an excellent remedy, and preferable to all others hitherto used. 2. The iodoform dressing completely takes the place of the Listerian, with additional advantage of greater simplicity and increased safety. 3. Iodoform dressing assures asepsis under circumstances in which it has been hitherto impossible. 4. In wounds already septic and in ulcers, iodoform generally purifies them more quickly and safely than any other antiseptic, and without irritating the tissues. 5. Iodoform acts specifically on syphilitic, scrofulous, tuberculous, and lupous infiltrations.

The results and conclusions of others of the earlier observers agreed in the main with those already quoted, and iodoform was used in the most reckless manner. Abscess-cavities were packed with it, joints were filled with it; large operative wounds were covered thickly with it. Some surgeons did not hesitate to put 150 to 200 grm. into a wound. This recklessness could lead to but one result, and cases of iodoform poisoning began to be reported. Dr. A. Henry,[2] assistant to Prof. Fischer in Breslau, reported two fatal cases. In one, a patient fifty-seven years of age, resection of the elbow was done, and 150 to 200 grm. of iodoform were packed into the wound. Death occurred on the fifth day, with symptoms of cerebral character, hebetude, etc.; nausea, rapid, weak pulse, and sunken belly. The autopsy showed fatty heart, liver, and kidneys. In the other case, an abscess at the knee was opened, and between 100 and 150 grm. of iodoform packed in. The patient died on the fifteenth day with symptoms like those of the previous case, except that there was no vomiting. The autopsy was negative. Others reported cases of poisoning, some transient, some fatal, and although the number of cases of poisoning was very small, especially in view of the immense quantities of the drug applied, surgeons became alarmed, and there was a decided revulsion of opinion in reference to the new treatment.

A glance at the accounts of the cases of poisoning serves to indicate that the old and debilitated, especially those with weak hearts, are particularly susceptible to the deleterious influence of iodoform, and warns us to be especially prudent with its use in such cases. And since, as in the case of most of our other valuable medicines, there is sometimes a notable vulnerability to iodoform, we should be always on the look-out for symptoms which indicate intoxication. These warning symptoms refer usually to the head, heart, or stomach, or to all three combined. When there is intense headache, hebetude, excitement, hallucinations, nausea, with or without vomiting, or very rapid and feeble pulse, it is the part of wisdom to immediately change the dressing, wash out the wound, and substitute some other mode of treatment. I believe with close attention to this matter, there is practically little or no danger in the use of iodoform as a wound-dressing.

Iodoform may be used in a variety of ways. The most common and, generally speaking, the best is in the form of powder, or in the crystals. The operation being completed, the hemorrhage controlled, and the wound irrigated with pure or carbolized water, the powder should be sprinkled on with a spatula from a pepper-box, blown on with an insufflator, or even poured on from a bottle. Some prefer to press it into the wound with a spatula, or rub it into the surfaces with the fingers. The object is to bring it in contact with the wound-surface, and it matters little how this is done. In small wounds it may be used freely; in large ones, we must remember the possibility of poisoning, and be more cautious. The more conservative authorities recommend that the quantity should be limited to ʒiij. I have not hesitated to use ʒiv–ʒvss in many instances. The other details of the dressing must depend on the nature of the wound. Sutures or drainage-tubes may be used or not, though it must be remembered that iodoform checks secretion, and many wounds in which drainage would be necessary with other forms of dressing will not require it with this. A layer of cotton, oakum, lint, or other convenient material, covered with macintosh, gutta-percha, tissue, or oil-silk, with a bandage, will complete the dressing. This may be left *in situ* until high temperature (after the second day), soaking through of secretions, pain, or other symptoms call for a change of dressing. I have left a dressing of this kind thirteen days, with none but the best results.

Iodoform gauze may be made very easily, and kept indefinitely. A good formula is as follows: Dissolve ʒxxiij of resin in f℥xxxvj of 94 per cent. alcohol, and add f℥iss of glycerine. In this fluid soak 6 m. (about 7 or 8 yards) of gauze (tarlatan), and, when it is about half dry, sprinkle ʒxiij of pulverized iodoform over it. The gauze may be applied to wounds, as carbolized or other gauze, but it is particularly useful in the treatment of wounds in the mouth, in or near the rectum, and in other parts where the powder cannot be conveniently used. An emulsion of any required strength may be made with castor oil or other bland vehicle, and is useful for injection into joints, abscess-cavities, etc. Suppositories made with cocoa-butter are sometimes useful, and a solution in ether may be applied in spray.

Iodoform is certainly a very valuable addition to our list of antiseptics, and presents some points of interest well worthy of study. Its portability and the simplicity of its application are points in its favor. Its use reduces the dressing of a wound to the minimum of trouble, and does away with all the complicated details of Listerism without losing any of its advantages. We can attain all that the antiseptic treatment has to offer wherever we can carry a bottle of the powder, and procure a bat of cotton, and for the country surgeon especially it is invaluable. These qualities also peculiarly fit it for the demands of military surgery, and I have no doubt that in the next war it will play a prominent part, even if, as has been suggested by a German surgeon, every soldier is not compelled to carry in his belt a bottle of the drug for the treatment of his own wounds. Iodoform is all-powerful in the presence of bad smells, and acts not merely by the substitution of its own instead, but by destroying them. No putrefaction can go on in a wound dressed with it. Wounds dressed with it, without change for days and even weeks, are found sweet and clean, and putrid wounds soon lose their fetor in its presence. Its power of decreasing secretion is of great importance in many cases, so much so that with it the drainage-tube, which would otherwise be necessary, may be dispensed with. It is without doubt the most powerful antisuppurative agent known. An important point in its favor is its local anæsthetic effect. Different in this respect from many other antiseptics, it soothes where they irritate. Nevertheless, it exercises a gently stimulant effect, and is equal, if not superior, to any agent known in transforming pale, flabby, exuberant granulations into those of a florid, vigorous, healthy character. The length of time a wound may be left without change should not be passed over without proper consideration. There is a great difference both to patient and surgeon as to whether a wound is dressed every day or twice a day, or once or twice a week, and the latter is the rule where iodoform dressing is used.

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[1] Berliner klin. Woch., 1881, 741

[2] Deutsche med. Woch., 1881, p. 461.

Against these manifest advantages we must consider the objections. The drug is rather expensive when we speak of it by the ounce, but it must be remembered that a little of it goes a long way, and, once applied, it remains for a long time, so that in the main it will be found to cost but little more than dressings ordinarily used, and by no means as much as the Listerian dressing. Its odor is intensely disagreeable to some, though for myself I must confess that I have the bad taste to rather like it. But it can be masked by a drop or two of the oil of bergamot to the drachm, or, as von Mosetig prefers, by keeping a Tonka bean in the bottle with it. I apprehend that the only real objection to iodoform is its danger, and we are not yet far enough advanced in its use to properly estimate its amount. I am inclined to think we can reduce it to a minimum, if we cannot entirely eliminate it, by watchfulness and care. The latest testimony I can find on the subject is that of Dr. H. F. McGill,[1] of Leeds, England, who concludes, after a six months' use of the drug, as follows: "An enlarged experience may possibly make me change my opinion in regard to the value of iodoform; at present I consider it a safe and reliable antiseptic."

My first experience in the use of iodoform as a wound-dressing occurred last summer. I was called on to amputate a thigh under circumstances of rather unfavorable character. The patient was a man of about sixty years of age; the weather was hot and disagreeable, and I had to operate by candle-light. I concluded to use iodoform as the most convenient dressing. The face of the stump was freely sprinkled with it; the skin-flap sutured, and the ligatures brought out at the lower angle. On the thirteenth day, I met my patient walking on crutches, with the stump healed, except at the angle where the ligatures came out. He had no fever or other bad symptom during his cure.

When my hospital service began in January last, I determined to give the drug a fair trial, and I have the pleasure to-day to lay the result before you. I take this occasion to express my thanks to Dr. Ralph Steiner, Assistant Resident Physician of the Maryland University Hospital, to whose zeal and care I am indebted for full notes of all the cases treated, from which notes this report is abstracted.

Case I.—G. A. F., aged 23, railroad employé; large axillary tumor on the right side (round-celled sarcoma), about four pounds in weight. The operation left the axilla pretty clean, and the arteries and veins exposed, etc. The whole wound-surface was sprinkled with iodoform in powder, a drainage-tube was placed in the lower angle, and silver wire sutures were used. A pad of oakum and a bandage completed the dressing. The operation was done January 26th, and on the 27th there was slight nausea during the night, no pain; temperature 99°; pulse 98. 28th: temperature 100°; pulse 100. 29th: temperature 101°; pulse 100. 30th: temperature 98.4°; pulse 100. 31st: temperature 101°; pulse 88. The wound was dressed and the tube removed. The discharge was found to be scant. The wound was washed out, dusted with iodoform, and covered, as before, with oakum pad and bandage. From this time the wound was dressed about every fourth day, and the favorable progress of the case was uninterrupted. He was discharged, with a small superficial granulating wound, at the end of the third week.

Case II.—A. Davis, colored, aged 43, laborer; caries of the carpus; amputation at wrist; dressed with iodoform as in the above case. On the second day there was slight pain; temperature 101°. From this time there was neither high temperature, pain, nor other indication for removing the dressing. It was removed, however, on the thirteenth day, and the wound was found united in great part. A few fistulous openings, however, remained, and upon subsequent probing it was found that the bone disease had invaded the lower end of the radius, and another operation became necessary, which will be reported below.

Case III.—Mrs. C. A., aged 50; amputation of breast (left side) and removal of axillary glands, necessitating dissection of the axilla. The patient was weak and nervous, with rapid, weak pulse before the operation. The wound was dressed with iodoform, oakum, and bandaged, with drainage-tube in the axilla. Second day: as there had been some oozing and discharge (serous) from the wound, it was dressed as before; temperature 101°; pulse 150. Third day: temperature 100°; pulse 130. Fourth day: temperature 99.3°; pulse 130. Fifth day: the patient was weak and semi delirious; nauseated; pulse was more rapid and weaker; ordered the iodoform removed and carbolized oil substituted. From this time, however, the patient grew weaker, the cerebral symptoms becoming more aggravated, and died comatose on the eighth day after the operation. (This case will be discussed more in detail below.)

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[1] Lancet, May 26, 1883.

CASE IV.—Fritz B., aged 10; amputation of thigh (middle-third). The patient's leg had been crushed five days before. He was brought into the hospital with a leg gangrenous to the knee, and his general condition was extremely feeble. The amputation was done, as a forlorn hope, by the circular method. The wound was dressed with iodoform, oakum, and bandage. Second day: temperature 102°; pulse 150, very weak. Third day: temperature 101.4°; pulse 140. From this time the patient gradually improved until the eighth day, when a discharge having appeared through the dressing, it was changed for the first time. The outer half of the wound was found healed by first intention. From the inner and lower angle there was some bloody serous discharge. The wound was washed out and dressed as before. On the ninth day tetanus developed, and, although the patient recovered fully from both that disease and the amputation, the remainder of the temperature record was made worthless for the purposes of our present study.

CASE V.—Harriet B., colored; small axillary tumors secondary to cancer of the breast, which I removed four years ago. The operation involved considerable laceration of the axillary tissues. The wound was dressed with iodoform, oakum, drainage-tube, and bandage. The dressing was left *in situ* for a week, during which time the highest temperature developed was 99.4°, on the evening of the second day. The drainage-tube was then removed, and two days later the patient was discharged, with a very small superficial granulating wound.

CASE VI.—Mrs. S., aged 58; cancer of cicatrix, from amputation of breast and several axillary tumors. The patient was very stout. The incision was thirteen inches in length. All cancerous parts, as well as axillary glands, were removed. The wound was dressed with iodoform, oakum, the tube, and bandage. The highest temperature, 100.1°, was on the evening of the fourth day, when the dressing was removed for the first time. Some pus was retained in the axillary portion of the wound. About two-thirds of the incision healed *per primam*. The wound irrigated. Fifth day: temperature 99°. After the fifth day the patient was subject to slight mental aberrations, probably due to mild iodoform-poisoning, but nevertheless made a good recovery.

CASE VII.—John P., aged 55, laborer; amputation of arm (middle). The wound was dressed with iodoform, oakum, and bandage. Second day: temperature 100.2°; pulse 112. Third day: the patient died of traumatic pneumonia, due to fracture of two ribs received in the same injury which made the amputation necessary. One of his legs was also severely crushed.

CASE VIII.—Lizzie H., colored, aged 25; axillary glands, due to cancer of the breast, were removed five years ago. All hardened glands that could be found in the axilla were removed. The wound was dressed with iodoform, oakum, and bandage — no tube. Second day: temperature 103°; pulse 90. Third day: temperature 103°; pulse 110; the dressing was removed and the wound was doing well in every respect. The examination, however, showed localized pleuritis, which accounted for the high temperature and pain complained of, and also vitiated the record as far as the temperature is concerned. . The patient, however, did well, and was discharged at the end of the second week with her wound nearly healed.

CASE IX.—A. D., aged 43, colored (same patient as Case II.); amputation of forearm. The stump was dressed with iodoform, oakum, and bandage. On the evening of the third day the temperature was 100.2°, and he complained of pain. The dressing was removed, and a somewhat abundant thin serous discharge was found. From this time it was dressed daily and irrigated with carbolized water. On the evening of the fifth day the temperature reached 102°, which was the highest point; afterwards everything went well and the patient made a good recovery.

CASE X.—Martha E., colored, aged 37; breast amputated and axilla cleaned out. The incision was eleven inches long. The wound was dressed with iodoform, oakum, and bandage, with tube. The highest temperature was 101.4°, on the evening of the second day. The dressing was removed on the sixth day, and more than half of the incision had healed. Three-fourths of the tube were cut off; the discharge was very scanty, and she left the hospital nearly healed on the twelfth day.

CASE XI.—Henrietta M., aged 20, colored; large osteo-enchondroma of the neck, in apposition to the angle of the jaw. It was removed by incision and finger dissection. and dressed with iodoform, oakum, tube, and bandage. The highest temperature was 102°, on the evening of the second day. The dressing was changed on the third day, very little discharge, tube removed. From this time there was uninterrupted favorable progress, and she left the hospital on the twelfth day.

CASE XII.—Harriet H., aged 67, colored; amputation of the breast and removal of the axillary glands. The wound was dressed with iodoform, oakum, and bandage. As there was considerable discharge on the second day, the dressing was changed. The highest temperature was 101.1°, on the fourth day. This patient was very feeble and required tonic treatment, but suffered from no surgical accident. She left the hospital at the end of the third week, with the wound practically healed.

Case XIII.—Antonin B., aged 43; traumatic hematocele of the tunica vaginalis, right side, with laceration of the testicle; sac laid open; clots and disorganized blood turned out; sac irrigated and well sprinkled with iodoform; cotton-pad and bandage completed the dressing. Third day: temperature 102°; dressing removed, and some retention found. Dressing changed daily, as the discharge was abundant. No septic or other trouble developed, and the patient left the hospital on the eighteenth day, with a wound only half an inch long, and granulating satisfactorily.

Case XIV.—Patience S., age 51, colored; large atheromatous tumor of back, removed by elliptical incision; wound dressed with iodoform, cotton, and bandage; highest temperature 102.2°, on evening of second day. Dressing was, however, not removed until the fifth day, when all the wound, except the lower angle, was found healed *per primam.*

Case XV.—John H., age 27; sequestrotomy; old necrosis of lower end of femur; involucrum opened with chisel and mallet, and sequestrum, about five inches long, removed in pieces; wound irrigated, and about sixteen grm. of iodoform poured into it. Oakum and a bandage completed the dressing. Highest temperature 101.4° on second day. The dressing remained *in situ* five days, when, as the discharge was abundant and foul, on account of the dead bone, it was changed. This patient spent but two days in bed, and the remainder of his progress while he remained in hospital was afebrile. He left on the ninth day, preferring to dress his wound at home.

I have also used iodoform on a number of interesting cases in private practice, of which I have kept no record, and on a large number of trivial cases which I have not thought worthy of consideration. I have given the more important cases in which the drug was used, and although the number is too small to warrant any general conclusions, the report may serve to aid us somewhat in forming an estimate of the iodoform treatment. For my part, my experience with it thus far encourages me to go on, at least, until I find something that will produce the same good effect without the danger of poisoning.

The summary of my results is as follows:

Greater amputations,	4
Sequestrotomy,	1
Axillary tumors,	4
Amputation of breast and axillary glands,	3
Atheroma of back,	1
Tumor of the neck,	1
Hematocele laid open,	1
Total,	15

In these fourteen greater operations, excluding atheroma of the back as rather a small matter, there was seen no septic trouble whatever. The highest temperature reached was 103°, which occurred upon the supervention of a pleuritis in a patient whose surgical condition was excellent. There were two deaths. One of them—VII.—occurred in a man who had been driven through a brick wall by a locomotive, and came to us with an arm crushed to pulp; collar-bone and scapula broken; two ribs fractured, and a mangled leg, besides probable internal injuries. Amputation was done as an act of humanity, to relieve shock and diminish pain, and produced the effect expected. No hope was entertained of recovery. The other death—III.—is far more interesting. I look upon this case as one of iodoform-poisoning. It will be observed in referring to the record that, upon the supervention of symptoms indicative of intoxication, I immediately ordered a change of dressing. I am prepared to confess that I was very much shocked when I saw the patient the next day to find that she was worse, instead of better, and greatly chagrined that efforts to stimulate produced no effect. It was only after the patient was dead, upon investigating the case, that I learned that the student whose duty it was to dress the wound had not seen the order to change and irrigate in the ward-book, and so had continued to dress the wound with iodoform until the day of the patient's death. I believe that if my order had been carried out, this patient would, in all probability, have been counted among the successful cases. I have had one other case besides the one mentioned in the report (VI.), in which, in an old woman with a large ulcer, which was being treated and (very successfully) with iodoform, symptoms of intoxication developed. The patient became weak, and complained of constant nausea. Change of treatment promptly relieved the symptoms.

My experience seems to justify the following conclusions in regard to iodoform as a surgical dressing:

1. It is a most valuable and convenient dressing, possessing great antiseptic power, and being perfectly simple in its application.
2. Its local anæsthetic power adds to its other advantages as a wound-dressing.
3. It decreases secretion in wounds, thereby making dry and infrequent dressing possible.
4. It does not prevent healing *per primam.*
5. It is dangerous, and should be used with great circumspection, especially in old and debilitated subjects and those with weak hearts.

246 Madison Avenue, Baltimore.

LEAD-POISONING FROM CANNED FOOD.

By WILLIAM E. MAGRUDER, M.D.,
of Olney, Maryland.

I have under my care at this time a young lady, suffering from chronic lead-poisoning, whose case is interesting, both because it has presented during its progress so many of the phases of the poisonous effects of lead, as well as from the source whence the poison was introduced into the system.

In this case, there have been the colic, arthralgia, and paralysis, involving first the extensors of the wrist, and then those of the lower extremities, and extending also to the flexors of both. The lead-cachexia was well marked, and the bluish line on the gum very distinct. The electric sensibility was much lessened, and the contractility to both faradic and galvanic currents was for a time entirely lost in the lower extremities, and very much lessened in the upper. The atrophy of the paralyzed muscles was also well marked. The young lady, though much improved, will probably never entirely recover. The case was also seen by Dr. C. G. Stone, of Brightwood, D. C.

I will not further allude to the symptoms of the case, though some of them were of great interest, as my object in writing is to call attention to the source whence the lead was introduced into the system, and to some observations I have since made in regard to the danger of poisoning from the same cause. After much trouble, I traced it to the use of corn put up in tinned cans by a recipe that required the use of tartaric acid. I tested the contents of several cans, and detected the presence of lead. This must have been derived either from the coating of the cans or the solder, or both.

Upon applying a drop or two of nitric acid to the surface of the can, allowing it to dry, and adding a solution of iodide of potassium, there was found the characteristic yellow spot. I then tested with the same test a number of cans in which food had been preserved, and found in all evidence of the presence of lead. Dr. Onderdonk, of St. James's College, Md., tested, at my request, a number of scraps of tin of which cans are made, and only found two which did not show its presence.

Dr. Dorsh states (*Chicago Med. Journal and Examiner*, Sept. 1878) that of a large number of specimens of tin plate, tinned cans, and other culinary articles examined by him, he found in almost every instance an alloy with lead, and it was often in large quantities.

These observations go to show that much of the coating upon the cans is not pure tin, but an alloy with lead. We are not as yet in possession of any facts which show tin as forming any compounds with the vegetable acids which give rise to poisonous effects, either acute or chronic, but we do know that lead forms such compounds. Now, if further investigations show that most of the cans used for canning are coated with an alloy of lead and tin (which is more readily oxidized and dissolved by acids than either metal by itself), what is more probable than that there should be injurious effects from this source?

I have a letter from Dr. Thomas Antisell, Principal Examiner of Chemicals in the Patent Office, in which he makes the following statement: "It is well known that all commercial tin is alloyed with lead, even up to the grade known as pure tin-foil, and the manufacture of tinned cans for the canned-food industry must place the food so preserved in the condition most likely to contain lead salts mixed with the organic matter; this is particularly liable with canned fruit." I have also a letter from Prof. Wormley, of the University of Pennsylvania, to my friend, Mr. C. Farquhar, who, at my request, had made inquiries on the subject, in which he says: "The use of canned fruits has, in a number of instances, been attended with the results you describe."

In *The Philadelphia Medical Times*, for May, 1874, a case of poisoning is reported from this cause. In *The Quarterly Compend. of Medical Science*, July, 1883, there is an account of an outbreak of lead-poisoning among 150 men of a regiment in the Southern Tyrol, one case ending fatally, and forty-five requiring to be treated in hospital, besides others who were not disabled for duty. The cause of the outbreak was traced to the tin-lined copper vessel in which their food was cooked, the coating of which contained lead. This shows the danger of poisoning from the coating used in tinning. There are a few other cases recorded to which I might refer as bearing upon the subject.

When we consider how much canned food is consumed, we should expect to find reports of a very large number of cases of poisoning from this source, if lead is present in the coating of the cans. But such is not the case. Very few, as far as I have been able to ascertain, have been reported. This may be owing to the fact that only a comparatively small number of physicians report cases. It may also be due to the fact that many minor forms of lead-poisoning have not been recognized and treated as such. Now there is no difficulty in diagnosticating a case of well-marked lead-poisoning, but it is not so with slighter cases. Several other members of the family in which my case occurred complained of a bad taste, pains in limbs, general malaise, numbness of the hands and wrists, etc., which would not have been ascribed to that cause had not my attention been called to them in the other case. I found then the characteristic blue line on the gums. The first cases which occurred among the soldiers of Southern Tyrol, reported above, were treated as muscular rheumatism.

How many physicians who have not had their attention specially called to lead-poisoning, would recognize as a mild form of "lead encephalopathy" such a case as described by Dr. Hammond, thus:

> "The patient suffers from headache, vertigo, and various other abnormal sensations, such as fulness and constriction, and at the same time is incapable of much intellectual exertion without suffering an increase of his physical symptoms. His mind is irritable and depressed, and his sleep is generally disturbed with unpleasant dreams. The digestion is generally deranged, and the whole appearance may be cachectic . . . . This condition may undergo no further development, but it is often the precursory state of the more severe form of the affection."

Dr. Anstie, in his treatise on *Neuralgia*, uses the following language:

> "Lead poison sometimes enters the system continuously, for a long period, but in proportions too minute to produce the effects which we identify as an attack of lead-colic . . . There is a minor degree in which it may happen that the local affection (owing, I believe, to a less extensive deposit of lead in the bowel) does not reach the decidedly paralytic stage; the state then is one of irregular and painful spasms of individual fibres (quite possibly intermingled with paralysis of a few others), and the practical result is irregularity of evacuation—now diarrhœa and again constipation—and the frequent recurrence of twinges of pain that

are easily mistaken for abdominal neuralgia. Such symptoms as these are nearly always found to have occurred, if proper inquiry be made, in those examples of chronic lead-poisoning in which the toxic process goes on to the development of epilepsy, or marked symmetrical paralysis of the wrist-extensors, without the patient ever having suffered an attack of ordinary colic. In these slow and insidious cases, the constitutional affection may not have reached the height at which the complexion and general aspect of the patient suggest metallic poisoning, and the case may present very neuralgic-like features . . . It is therefore an excellent rule, in all cases of chronic, recurrent, spasmodic pain in the abdomen, especially in men, to investigate the possibilities of lead-poisoning, and if the slightest suspicious appearance of the gums be found, this track of inquiry must be followed up exhaustively before we abandon the idea."

Naunin, in Ziemssen's *Cyclopædia*, vol. 17, page 626, says:

"Frequently, poisoning of a mild grade is said to be caused by eating acid or fatty articles of food which have been kept in tinned vessels, owing to the solution of the metal. It is to be remembered, however, that tin is frequently contaminated with lead, copper, and arsenic, or that alloys of tin and lead are used instead of ostensibly pure tin. Thus, the so-called rose tin (Bohemian tin) is said to contain as much as ten per cent. of lead."

In the Report of the Court of Inquiry on the loss of the Arctic steamer Jeannette, I find there statements which, I think, still further confirm the views expressed.

On page 30, Lieut. Danenhower, in answer to this question by the Court, "Did the character of the provisions supplied to the Jeannette cause sickness at any time?" said, "In May, 1881, a number of the people became affected with stomach disorders, which were attributed to tin-poisoning. It had been observed that the inside of the tomato cans had turned dark, as though acted upon by the acid. . . . The tomatoes were marked Red Cross brand, and were excellent in quality most of the cruise. They had been subjected to two winters' and two summers' exposure."

On page 36, in answer to a question by the Judge Advocate as to the physical condition of the men when landed on the ice, June 1, 1881, the same witness said, "The physical condition was good, with the following exceptions, viz.: Lieut. Chipp was disabled and prostrated by what was supposed to be tin-poisoning. . . . A number of men, among whom were seamen Kuchne, coal-heaver Lauterbach, and the steward, Charles Long Sing, were also affected by the tin-poisoning, and were prostrated a few days later."

I have no doubt that the so-called "tin-poisoning" was really lead-poisoning, resulting from the use of cans coated with the alloy of tin and lead.

I therefore believe that if the possibility of poisoning from this source were kept in mind and investigated, and observations made in that direction, many cases would be recognized as such, and light thrown on many obscure ones that have puzzled us.

In the *American Chemical Journal*, vol. 14, No. 6, there is an article on the action of vegetable acids on lead and tin, where the author's observations in regard to the purity of tin and the danger of poisoning from canned food, differ from what is stated above. I have not the article at hand to quote from, but will close mine with the hope that a thorough investigation may be made into the subject by those best qualified to do so.

August 13, 1883.

THE SPLANCHNICS.

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It is well known that Pflüger[1] discovered that these nerves inhibit intestinal movements. He found that when the electrodes are inserted about the fifth and eleventh dorsal vertebræ, that a faradic current sent through them arrested the peristalsis of the small intestine, but did not affect the larger one. It has also been shown by Keuchel that large doses of atropine paralyze these inhibitory nerves.[2] In another paper[3] I have tried to uphold the theory that besides the intestino-inhibitory we also have an intestino-motor apparatus, and that some drugs excite the inhibitory and others the motor apparatus of the intestine. In this paper I shall still further adduce facts in support of the preceding theory by a study of the action of the same drugs on the splanchnics.

Method: Rabbits were etherized by the subcutaneous use of the anæsthetic, then the drug injected subcutaneously, and Ludwig's needle electrodes inserted into the fifth and eleventh dorsal vertebræ. The abdomen was opened, and the intestines covered with a towel wet with a one-half per cent. salt solution heated to 98° F. The room, during the experiments, had a temperature ranging between 90° and 98° F. When the intestinal movements were active, a strong faradic current from Du Bois' inductorium was sent through the electrodes, and the effect on the peristalsis noted. The reaction of the intestine was always tested by the salt crystal according to the method of Nothnagel. The salt always causes a wave of contraction running towards the pylorus. With nicotine and muscarin, the salt causes a wave of contraction upward and downward from the crystal. When a milligramme of atropine was given subcutaneously, in about ten minutes the salt-reaction failed, and when the splanchnics were irritated the peristalsis was arrested. If now .0005 gramme of the salicylate of eserin was given to the same animal, the result was the same, except the salt reaction is present.

It is not so easy to find the intestine in active movement, when small doses of atropine are given, so as to judge of the influence of the splanchnics. If, however, a larger dose of atropine, .004 gramme, is given, then, as Keuchel has already proved, the irritation of the splanchnics fails to arrest peristalsis, the bowels respond again to the salt. If morphia in small doses is given, the salt-reaction fails, as Nothnagel noted, but the splanchnics are still active when irritated. If nicotine is given to the same animal, the salt-reaction runs in both directions, and the splanchnics are still active for a period, till large doses are given, when they do not inhibit. It was also noted that morphia, when followed by a moderate dose of nicotin, kept the bowel free from the tetanic spasm of the latter drug, as happens when it alone is given. In the one case, the bowel is relaxed, in the other contracted. If muscarin is given subcutaneously the salt-reaction spreads in both directions and the splanchnics are still active. If a small dose of eserin is given the splanchnics are active when the peristalsis is active, later they seem to become weaker. If large doses of morphia sulph., .2 gramme, are given subcutaneously, the salt-reaction is present and the splanchnics are nearly absolutely paralyzed. It is possible with the eserin, nicotine, and muscarin that they so excite the intestino-motor ganglia that the splanchnic inhibition is not able to overcome it when large doses of the drugs are given. It is certain that nicotine, eserin, and muscarin do not excite the peristalsis by a paralysis of the splanchnics, as large doses of atropine and morphia do.

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[1] Ueber das Hemmingsnervensystem für die Peristalsis den Bewegungen des Gedarme, Berlin, 1857.

[2] Das Atropin und die Hemmingsnerven, Dorpat, 1868

[3] New York Medical Journal, 1883.

These experiments lead to the conclusion that drugs act on the intestino-motor and intestino-inhibitory apparatus. That with the inhibitory drugs, atropine and morphia, in small doses the splanchnics are active, and with large doses of the same drugs they are paralyzed. That with the intestino-motor drugs, nicotine, muscarin, and eserin, the splanchnics in the beginning are not paralyzed by small doses, and that large doses of nicotine and eserin greatly weaken them.

It might be supposed that all these drugs act on the muscular fibre, and thus produce these peristaltic changes, for Dr. Gaskell has shown that muscarin arrests the apex of a frog's heart, which contains no ganglia. Whilst I do not exclude a partial action on other parts of the intestine, yet the active peristalsis must certainly have some other apparatus than the muscular fibre to depend upon. I feel quite confident that the ganglia of Meissner, Auerbach, and the isolated ganglia of Klein, play the main *rôle*.

To one who has microscopically examined, by the gold method, these ganglia, their large number and extensive ramifications will make the theory of nervous origin seem a quite reasonable one.

Experiment I.—Rabbit: Etherized, received .001 gramme of atropine subcutaneously. In twenty minutes abdomen opened, no salt reaction present. After watching intestinal peristalsis for some time, a strong faradic current was sent through the electrodes and the peristalsis arrested. Then .0005 gramme eserin was given subcutaneously; still irritation of the cord caused arrest, even when the salt-reaction was present.

Experiment II.—Rabbit: Etherized, .02 gramme morphia subcutaneously. In twenty minutes the salt-reaction failed. Spinal cord irritated, and the intestinal movements were arrested. Then .0005 gramme eserin subcutaneously, after which the intestine responded to salt. Irritation of cord arrested the movements.

Experiment III.—Rabbit: Etherized, received .001 gramme atropine subcutaneously; salt-reaction not present; irritation of cord arrested peristalsis; .004 gramme atropine given. In about twenty minutes afterwards the salt-reaction was present, and irritation of the spinal cord failed to arrest the movements.

Experiment IV.—Rabbit: Etherized, received, subcutaneously, .015 gramme morphia; salt-reaction was not present; irritation of spinal cord arrested peristalsis. Then 1 gtt. of nicotine given subcutaneously. In twenty minutes salt-reaction marked; faradic irritation arrested the intestinal movement. Another drop of nicotine was given subcutaneously; salt-reaction in both directions; faradic irritation had less and less effect, till it failed to arouse the inhibition.

Experiment V.—Rabbit; Etherized, received 1 gtt. muscarin sulph. subcutaneously; salt-reaction present in both directions; faradic irritation arrested the movements for about forty minutes after the injection of the drug. The saliva was flowing profusely from the action of the drug.

Experiment VI.—Rabbit: Etherized, received .2 gramme morphia subcutaneously. In about half an hour the splanchnics were nearly completely paralyzed.

Experiment VII.—Rabbit: Etherized, received .0008 gramme eserin subcutaneously. In fifteen minutes the splanchnics were still active, although tetanus of the intestine was present.

Experiment VIII.—Rabbit: Etherized, received 1 gtt. of nicotine subcutaneously. In the beginning the splanchnics were active, but finally they failed to respond.

MEDICAL PROGRESS.

TREATMENT OF TUMORS BY ELECTROLYSIS.—NEFTEL has returned to this method of treating malignant tumors, destroying them at a single operation. A platinum anode is plunged perpendicularly into the tumor down to its presumed point of implantation, and from three to five cathodes placed on the periphery of the tumor. The current is then closed and rapidly carried to its greatest power (30 to 60 elements). The position of the cathodes is changed about every five minutes, so as to cover every part of the tumor. The operation lasts about an hour. The tumor becomes livid, gray, and finally black. There is a very slight general, and local reaction. In two or three days the part operated upon becomes cold, and after some discharge finally comes away *en bloc*, leaving a denuded surface which is soon covered by healthy granulations. Neftel has also treated benign tumors by this method, though they do not require such energetic treatment as those of the malignant type. The conclusions which he draws are: 1. Electrolysis is an antiseptic method, and as such may be combined with the ordinary methods of operation. 2. It is preferable to any other method in the treatment of malignant tumors. 3 Malignant tumors should be entirely destroyed by the operation, and at a single séance. In benign tumors it is sufficient to establish a retrograde metamorphosis.—*Virchow's Archiv*, Bd. lxxxvi. Hft. 1.—*Bull. Gén. de Thérap.*, July 30, 1883.

Rupture of the Small Intestine: Resection.—At the meeting of the Société de Chirurgie on Aug. 1st, M. Berger made a report on the cases previously reported by Dr. Bouilly. The patient, a strong young man, was kicked by a horse just above the umbilicus, and immediately felt a very violent pain in the abdomen. Some hours later he was admitted to the hospital with all the signs of peritonitis. Rupture of the intestine was diagnosticated, and laparotomy was performed. Two ruptures were found at a short distance from each other, with violent congestion of the intestine and escape of the contents into the peritoneal cavity. M. Bouilly, in view of the double rupture, resected the injured portion, and removed an injured portion of the mesentery at the same time. A double series of sutures was put in, the peritoneal cavity carefully dressed, and the abdomen closed. Opium was administered to prevent peristaltic action, and a little champagne and rum given as a stimulant. Although the patient felt better after the operation, the peritonitis, though evidently decreasing, continued. On the second and third days the change for the better was still more marked, the pulse being sensibly stronger. On the third day the bowels acted naturally, but at the same time the sutures ruptured and fecal matter escaped through the abdominal wall. In spite of this accident, the patient did very well until the eighth day; at this time M. Bouilly made an exploration of the wound with one finger. A few hours later, violent pains came on, with vomiting, and the patient succumbed in twenty-four hours.

At the *autopsy* the sutures were found to have given away, but it was evident that the sutured ends of the intestine had been held together by plastic material thrown out by the local peritonitis; and it is probable that the exploration had ruptured this adhesion, causing fecal extravasation and general peritonitis.—*L'Union Méd.*, August 14, 1883.

Chronic Intestinal Catarrh.—Prof. Nothnagel, at the meeting of the k. k. Ærztlicher Gesellschaft zu Wien., on May 18th, spoke on the subject of chronic intestinal catarrh, which, he said, has been little mentioned in text-books. There is also no explanation given, in physiological text-books, of the fact that healthy individuals have generally only one stool in the twenty-four hours; and Nothnagel thinks that no explanation can be given, but that it is one of those arrangements, depending partly on the anatomical relations of the parts, and partly on innervation, for which we cannot account. Chronic intestinal catarrh may be considered to be present when mucus appears in the motions, although the absence of mucus must not be regarded as conclusive evidence against the existence of catarrh.

Nothnagel divides the cases of chronic intestinal catarrh into four classes: 1. Those patients who have a stool every second or third day, often produced artificially; this is the type of primary chronic catarrh of the large intestine, and depends, according to Nothnagel, on diminished anatomical activity of the ganglion-cells: 2. Cases where a stool is passed daily, but each time thin, pulpy, and mixed with mucus: 3. Cases with irregularity in the state of the bowels, sometimes constipation, sometimes diarrhœa, and sometimes an alternation between the two; the diminished activity of the nerve-cells explains the constipation, and the irritation of the feces causes eventually the diarrhœa, which may also be excited by a very small error in diet. 4. Cases with continued diarrhœa. Here, however, chronic ulceration of the bowels must be distinguished from catarrh. Where diarrhœa is present without ulceration of the large intestine, Nothnagel has always found an affection of the small intestine as well. When the food does not undergo its normal changes in the small intestine, it acts as an irritant on the mucous membrane of the colon, and causes the diarrhœa. Some patients have a stool after each meal, some after a mid-day meal only, and some after an evening meal only. Nothnagel would explain this by referring it to nervous influence.—*London Med. Record*, July 15, 1883.

Decoction of Lemons in Malarial Fever.—Dr. Maglieri has recently used a decoction of lemons in cases of intermittent fever, with much satisfaction. It was first used in three bad cases, being administered about four hours before the expected paroxysm. The results were, absence of the paroxysm in one case, only a slight paroxysm in the second, and sensible amelioration of all the symptoms in the third, a case in which quinine had failed to produce good results. A fourth case is also reported in which large doses of quinine had no effect, but in which decoction of lemons was successful. Maglieri concludes that: 1. Decoction of lemons employed in malarial affections gives results equal, and often superior to those of quinine. 2. It is not only efficacious in the same cases in which quinine gives good results, but in cases in which the latter has no effect. 3. It is not less efficacious in chronic than in acute malarial affecions. 4. It has none of the inconveniences of quinine (irritating action on the mucous membranes and roaring in the ears). 5. It may be given even during a catarrhal state of the digestive tract. The decoction is prepared by cutting a fresh lemon into small pieces; three cups of water are then boiled down to one cup, the pieces of lemon are put in and thoroughly pressed. It may be given when cold.—*Bull. Gén. de Thérap.*, July 30, 1883.

Physiological Properties of Doundaké and Doundakine.—The doundaké is a shrub of the rubiaceæ family, and is found on the western coast of Africa. The bark, employed by the natives as a febrifuge, has a very bitter taste. MM. Bochefontaine, Féris, and Marcus have isolated an organic base from the bark—a yellowish powder, formed of microscopic rhombohedral crystals. This powder is bitter, soluble in water and alcohol, and of an alkaline reaction. In Winkler's fluid it precipitates phosphotungstic and phosphomolybdic acids. The experimenters have given it the name "doundakine." Its action on the frog is as follows: The hypodermatic injection of gr. ⅛ of doundakine, representing grs. xxx of the bark, produces death in thirty-six minutes. The physiological effects of the bark and doundakine are identical, and may be stated as follows: In the frog, in from two to five minutes, there are noticed a little feebleness and diminution of spontaneous and reflex movements, the frog being incapable of assuming a normal position. Placed in any particular position, he remains so without attempting to change it. Muscular contractility and nervous excitability were maintained, and the heart's action was not sensibly modified. This first period is followed by a second, in which the respiratory movements are irregular and then intermittent, become slow, and are finally arrested, while the heart-beat is regular, though somewhat slower. The reflex movements are gradually abolished.

The same results are obtained when the experiment is made on a frog from which the brain has been removed. But if the cord is cut at the level of the calamus, the frog dies without presenting the above phenomena. The striking fact of the action of the drug is the progressive slowing and arrest of respiration, which takes place while the heart's beat is perfectly regular. The experimenters conclude that doundakine is a toxic agent, acting more particularly on the medulla and cerebellum, and inducing a cataleptic state.—*Gaz. Hebdom.*, Aug. 3, 1883.

Resorcin as a Local Application.—Dr. Bombin has made extensive trials of resorcin, oxyphenol or diatomic carbolic acid ($C_{12}H_6O_4$), as a local application. He uses the drug in the form of alcoholic solutions of different proportions. The first, of equal parts of resorcin and alcohol, has a distinctly caustic action; the second, of one part of the acid to ten of alcohol, and the third of one to twenty, are stimulant and antiseptic. A one per cent. solution is found to perfectly prevent decomposition. In obstinate syphilitic ulceration, Dr. Bombin first cauterizes the surface of the sore with the 100 per cent. solution, and then applies the 10 per cent. solution night and morning till the eschars are separated, and afterwards the 5 per cent. one till cicatrization is complete. He speaks most highly of his success in cases which had been before very intractable. As a local application, he has had very good results in orchitis and epididymitis with a 6 per cent. solution, and uses a 1.5 or 2 per cent. solution with good effect to wash out the bladder, but he considers that it acts in the latter cases simply as a local disinfectant. Moreover, he has not found that, taken internally, it has any curative action in such cases, as has been stated, and similar indecisive results followed its internal administration in cases of strumous glandular affections. In epithelioma of the cervix uteri, its local action does not seem to differ at all from that of carbolic acid; taken internally in large doses, the drug appeared to exercise a certain arresting influence on the spread of the disease, and there was some attempt at cicatrization. On the whole, it is plain that, in Dr. Bombin's opinion, resorcin is a very valuable local application for chronic tertiary ulcerations, exerting on them a distinct curative action, but that the value of the drug when taken internally is doubtful, and that, as a local application, in most cases it is not superior to carbolic acid as a disinfectant, save that it has less smell, and is more soluble in water, ether, and alcohol.—*London Med. Record*, July 15, 1883.

Eucalyptus in Pulmonary Gangrene.—Dr. Bonamy, of Nantes, reports an interesting case of pulmonary gangrene in a patient, æt. 50, who came into the hospital on Oct. 15, 1882. There were fever and dyspnœa, mucous râles in both lungs, but especially in the left; feeble pulse, and the well-known gangrenous odor, so intense that the patient had to be placed in a separate room. The sputum was composed of blackish nodules. There was a great deal of cough which increased the intensely disagreeable odor of the breath. After trying a carbolic acid mixture for two days and finding no improvement in any symptom, Dr. Bonamy prescribed the following: Alcoholate of eucalyptus, ♏xxx; sweetened water, f℥iij; syrup of poppies, fʒv; quinine being given at the same time. On Nov. 6th, twenty-two days after the patient was first seen, the bad symptoms had almost entirely disappeared.—*Bull. Gén. de Thérap.*, July 30, 1883.

Ligation of the Common Iliac.—At the Twelfth Congress of the German Surgical Association, Kümmel, of Hamburg, reported the case of a young man, æt. 21, upon whom the operation for double extirpation of bubo had been performed. Though antiseptic precautions were used, a diphtheritic process was set up in the wound in the left side, and four days after the operation the external iliac was ligated on account of hemorrhage from the central end of the femoral. Secondary hemorrhage again occurred, and the common iliac was ligated. Ten days afterwards, profuse secondary hemorrhage occurred from the peripheral end of the femoral on account of gangrene, and amputation was performed. The patient finally recovered. Ligation of the common iliac has been performed fifty-five times, the great majority of the operations having been performed by English and American surgeons. It has only been done three times in Germany, all fatal. Of the fifty-five cases, forty-one were fatal, from collapse, gangrene of the extremities, and septic infection from the wound.—Beilage zum *Centralbl. f. Chirur.*, No. 23.

Compound Comminuted Fracture of the Skull, with Wound of the Superior Longitudinal Sinus; Lateral Suture of Vein-wound.—Dr. Charles T. Parkes, of Chicago, reports the following interesting case: B. B., æt. 27, laborer, was admitted to the Cook County Hospital, June 20th, at 4.50 p.m., suffering from a compound comminuted and depressed fracture of the skull. Patient has always enjoyed good health; no hereditary taint, nor venereal accidents. Has been a moderate drinker, but was not under the influence of liquor at the time of the accident.

While working on a building several bricks fell from the top of a wall, one of which struck him on the head, prostrating him, but not so that he lost consciousness. The hemorrhage was then quite profuse; a few rude attempts were made to control it until he was conveyed to the County Hospital.

On admission his general condition was fair; hemorrhage had nearly ceased, looked otherwise in good health.

On examination a lacerated wound of scalp was found about two inches in length, of general triangular form, over right parietal bone, above and posterior to the parietal eminence, extending to the median line; also a depressed fracture in same locality, one and a half inch in diameter, oval in form, was made out. There were sensations of numbness and loss of motion in both upper and lower extremity—left side. Dr. Parkes had the patient immediately anæsthetized, and after enlarging the external wound slightly, four fragments of the external table of the skull were removed. This operation was followed by such terrific hemorrhage that no further attempt was made to remove other fragments. The hemorrhage coming from the superior longitudinal sinus was controlled by packing the wound with gauze, and applying a compress. Several small vessels of the scalp were also twisted.

On June 21st, Dr. Parkes removed compress and gauze, and extracted three fragments of the internal table and one of the external table. Hemorrhage again occurred from a perforation in superior longitudinal sinus about size of a coffee-grain. This was closed by three catgut sutures, perfectly controlling the hemorrhage. Slight compress of gauze again applied; scalp wound partly closed by one silk ligature; the whole retained by bandage. The fragments taken from inner table of skull were four in number. The fragment from the external table was the fifth fragment from that table.

On July 20th the pulse and temperature were normal, the paralysis was gone, there was no pain, no inconvenience whatever; says he is all right; only slight loss of motion remaining in toes of left foot; dressed the head; from right and lower margin removed a piece of bone, which was found protruding and loose; from this time on several small pieces were removed, evidently fragments which had become necrotic on the edges.

On September 8th, there was no suppuration, motion and sensation had returned almost completely in the affected extremities, and the patient was discharged well and strong.—*Annals of Anat. and Surg.*, September, 1883.

Ectopia of the Heart.—Prof. Tarnier, at the meeting of the Académie de Médecine of July 31st, introduced to its notice a highly interesting case of ectopia of the heart. The subject of it is a woman at the end of her pregnancy with her second child, no inconvenience having attended her first delivery. The sternum is bifid at its lower portion, so that the heart lies just below the skin. The ventricles can be taken hold of by the hand, but in order to feel the pulsation of the auricles the fingers must be passed into the upper part of the sternal cleft. The patient is also the subject of an umbilical hernia, and the displaced heart seems to have some immediate relations with this hernia. It would be difficult to appreciate the exact relations of the displaced organ. Is the pericardium intact? Is the heart free in the abdominal cavity? It is absolutely impossible to pronounce an opinion on this point. All that can be affirmed is, that the diaphragm is perforated, and that it is through this perforation the heart has passed, and become placed under the skin, accompanied or not with its proper serous membrane. After the woman has been delivered at the Maternité, where she is at present, the phenomena will be investigated by MM. Marey and Franck.

Prof. Marey stated that he and M. Franck had already taken some tracings. "This is," he observed, "one of the most interesting of cases, for it will allow, I have no doubt, of our verifying on the human subject the results obtained by experiments made on the heart in animals, such as the synchronism of the ventricles, etc. In this way, and without insisting at present more on the subject, the exploration of the heart of this woman will allow of our exhibiting the illusion which has given rise to the theory of Beau for the explanation of the pulsations of the heart. Beau explained the beating of the heart by cardiac dilatation under the influence of the afflux of blood at the moment of the ventricular diastole. This opinion appeared logical, for it is rational to admit that the impulse is produced at the instant when the organ increases in volume, and not when it contracts upon itself. But this explanation, however logical it may appear, is not the true one, and if any doubt exists about it an examination of this patient must carry conviction. If, in place of looking at her heart, we seize hold of it with the fingers, we prove in the most distinct manner that it is not when the heart is largest that the impulse is produced, but really when it is hardest. If the Academy will appoint a committee in order to examine this woman in relation to cardiac physiology, and it does me the honor of placing me on it, we shall be able after her delivery to undertake a series of researches for the elucidation of these various points. Cases of this kind are, in fact, extremely rare in the adult, and I have only been informed of one which existed at Ribeauvillers, in Alsace." A committee, consisting of Professors Vulpian, Sappey, and Marey, was appointed.—*Med. Times and Gazette*, August 18, 1883.

Diagnostic Value of Uterine Hemorrhage after the Menopause.—During the course of a late clinical lecture on malignant disease of the cervix uteri, Dr. T. Gaillard Thomas stated, as an axiom in gynecology, that if a woman who has normally ceased to menstruate begins to have uterine hemorrhage, always suspect carcinoma. Not infrequently you will see in the medical journals the reports of cases where women who have passed the change of life have begun to menstruate regularly again; but such accounts are altogether deceptive, and, if these cases could be followed out, it would be found, with scarcely a single exception, that the uterine flow was merely the indication of the presence of malignant disease. In other words, there is absolutely no such thing as a return of the menses when a woman has once reached the normal menopause. Not long since a patient of mine in the Woman's Hospital, who is sixty years of age, began to have a flowing from the uterus, and, as there was no indication of any external disease, I applied the curette to the endometrium and drew out some pulpy masses, which I sent to a well-known microscopist for examination. The report that I got from him was that the growth was not malignant in any respect, but was simply a form of polypus. I am perfectly sure, however, that the microscopist is wrong, and for this reason: in the uterus of a woman of sixty, polypi never develop. The organ at that age is completely atrophied. Sometimes in women who have passed the menopause you will find uterine tumors which have all the appearance of fibroids. They are not by any means fibroids, however, but sarcomata.—*New York Med. Journal*, September 1, 1883.

Synovitis of the Wrist with Rice-like Bodies.—Incision in these cases has come again into favor as one of the consequences of antiseptic surgery. MM. Verneuil, Nicaise, and Notta have communicated to the Société de Chirurgie several remarkable examples of its successful employment; and M. Lafosse has recently published a *thèse* in which the whole subject is reviewed. He concludes that medical means, such as blistering, revulsives, etc., have no effect in these cases. Compression by bandages steeped in alcohol or various stimulant liquids are sometimes useful, but they only act by repelling the riziform bodies into the neighboring tendinous sheaths. Injections of tincture of iodine give better results, but they are only applicable to unilocular cysts. Incision and drainage, which formerly were followed by severe accidents, such as purulent sinuses, phlegmon, and purulent infection, are now attended by the best results when performed under the strict antiseptic method. Cures by the first intention, although possible, are quite exceptional.—*Med. Times and Gazette*, Aug. 18, 1883, from *Journ. de Thérap.*, July 25.

Biliary Atrophy and Hypertrophic Cirrhosis of the Liver.—Maffucci, convinced that, between hepatic sclerosis due to retention of bile and that due to simple inflammation of the biliary passages of the great and small interlobular branches, there are grave etiological and anatomical differences, undertook a series of experiments and anatomical observations, which bring him to the following conclusions: 1. Cirrhosis from biliary stasis has altogether a different origin and signification from hypertrophic cirrhosis with jaundice. 2. In cirrhosis from biliary stasis, clinical as well as experimental, a destruction of hepatic parenchyma precedes, which is repaired by new formation of connective tissue and biliary ducts, the epithelium of which starts from preëxisting tubes. 3. In hypertrophic cirrhosis the acini remain intact, their trabeculæ are transformed into true embryonic tubes, and the connective tissue accompanies and follows the different phases of the same hepatic parenchyma. 4. Very similar to hypertrophic cirrhosis is the experimental process obtained without retention of bile. 5. In cirrhosis from biliary stasis, as well as in hypertrophic cirrhosis, there is an angiocolitis; in the first it is owing to the retention of the bile; in the second it depends on various causes, all of which are not yet known. 6. In hypertrophic cirrhosis, the irritation of the hepatic parenchyma may arise from the large biliary ducts, as happens in experiments, or from causes that acts directly on the parenchyma, as in clinical cases. 7. It is not the new formation of connective tissue which surrounds and invades the acini, nor the new formation of bile-ducts from those preceding, which constitutes the chief character of hypertrophic cirrhosis.—*London Med. Record*, August, 1883.

Salicylate of Soda in Diarrhœa.—Dr. Calleza terminates an article on the pathology of diarrhœas, their classification, and the use of salicylate of soda in fermentative diarrhœa, with the following conclusions:

1. The products of the putrefaction of the materials which pass through the digestive canal cause not only a great number of diarrhœal states evidently idiopathic, but also many cases of secondary diarrhœa, in which a preëxisting disease has engendered a disposition to putrefaction, which is developed under the least abnormal influences.

2. Salicylate of soda is the most efficacious agent for the prevention of putrefactive fermentation in the intestinal canal, without causing troubles of the normal metamorphosis of digestion. It should always be employed when there is a great fetor of the stools, especially if this characteristic has been noticed at the commencement of the trouble.

3. An amount varying from grs. xxx to xlv *per diem*, given in two or three doses, is sufficient to cause rapid cure of putrefactive diarrhœa, when it is idiopathic in the whole sense of the word.

4. In those cases which are really secondary (and they form a very small number), salicylate of soda may also be used with advantage.

5. In syphilitic and phthisical diarrhœas, and in those which accompany visceral abscesses—and especially abscesses of the liver—and dysentery, salicylate of soda has given the best results.—*L'Union Méd. du Canada*, July, 1883.

Papilloma of the Bladder.—A case is described by Rauschenbusch of a growth occurring in a man æt. 43, which was removed by operation. The patient had been suffering from bleeding from the urethra and cystitis for about a year, and when in the hospital he often passed bits of a villous tumor with his water, the dendritic character of which could be easily determined by floating them out in water. The tumor could be felt at the base of the bladder, by introducing the hand into the rectum whilst a catheter was in the bladder. Median lithotomy was performed, and the tumor, which was attached by a long stalk, was seized and twisted off, so as to avoid all danger of hemorrhage. Three or four weeks later the patient was free from all symptoms, and the wound healed. A year later there had been no return. The author draws attention to the fact that only seven cases of such operations are recorded, and in only five cases were they attended by success. It appears, too, that the favorite seat of these tumors is on the trigone, and near the orifices of the ureters, very rarely if ever at the top or sides of the bladder.—*Practitioner*, August, 1883.

Treatment of Varicocele by Intervenous Injections of Alcohol.—Kranzfeld describes (*Vrach. Vedom.*, No. 540, 1882) a simple and easy method of treating varicocele, which had been successfully practised in seven patients by Dr. G. T. Dukhnovsky, of the Odessa Military Hospital. The method consists in injections of 85 to 90 per cent. alcohol into the subcutaneous cellular tissue surrounding the spermatic veins. The needle of a Pravaz's syringe is introduced under the skin at any point facing the dilated veins, and is brought, with the help of the operator's left hand, as nearly as possible to the diseased vessels; then the syringe is slowly emptied. The injection causes only moderate burning pain, lasting from half an hour to three hours. On the next day after the operation there appears a considerable, but almost painless, swelling of the parts, which is at first soft, then becomes more tense. The injections are repeated at three or four days' intervals, from three to ten times, according to the demands of the case. Finally, the spermatic veins are transformed into thin hard cords. In all the seven patients of Dr. Dukhnovsky cure was complete (at least the patients remain quite well as yet). The same method proved equally efficacious in two cases of dilated veins of the leg.—*London Med. Record*, August, 1883.

Capillary Pulse.—In normal physiological existence, the pulse-waves become so toned down by the elastic property of the arterial walls that no pulse can be said to exist in the capillaries. Under certain circumstances the pulse-wave is carried over to the capillary vessels and may be there demonstrated. Quincke published a paper on the subject in 1868 in the *Berliner klin. Wochenschrift*, No. 34. According to him, the capillary pulse, characterized by alternating pallor and redness of the tissues isochronous with the systole and diastole of the heart's action, is specially perceptible in the matrices beneath the nails. The phenomenon may be seen sometimes in the healthy body, in those suffering from anæmia, and especially in individuals the subjects of aortic regurgitation. Quincke further observed the capillary pulse in the capillaries of the fundus oculi of two patients under treatment for valvular insufficiency of the aorta. Writing in *La France Médicale*, No. 15, M. Albert Ruault has again drawn attention to the phenomenon. He recommends the production of a vaso-motor disturbance by drawing the finger-nail smartly across the skin of the forehead and studying any variations which may present themselves. A sensitive area, so to speak, is thus produced where the capillary pulse may be seen in those in whom it happens to exist. Ruault has observed the condition in various pathological states where the coexistence of excessive cardiac impulse and general arterial narrowing was noted.—*Lancet*, Aug. 18, 1883.

Primary Tubercular Arthritis.—Dr. F. Arnaud, in a recent paper on this subject, in which he reports two cases, draws the following conclusions:

1. Tuberculosis of the synovial membranes is primary and independent of osseous lesions, or secondary (osteo-arthritis) and consecutive to the development of tubercles of the epiphyses.

2. Primitive tuberculization, with which we are now concerned, is manifested in the synovial membrane under the two anatomical forms of grayish granulations, and microscopic elementary tubercle. This elementary tubercle always accompanies the granulation, but it may exist alone, independent of any tubercular lesion visible to the eye.

3. Synovial tubercles have been found and studied in fungous tissue, but may be observed in the absence of any fungous alterations, and also in the fistulous tracts in the walls of periarticular abscesses, especially where the new growth has developed by a true inoculation.

4. The tuberculous nature of chronic arthritis may easily pass unperceived unless microscopic examination be made. It is important in all cases of arthritis, with or without osseous lesions, to make a complete anatomical and histological examination of the synovial membrane and of the periarticular tissues.

5. We believe that ultimate researches will demonstrate the tuberculous nature of a certain number of white tumors of the soft parts, of fungous or non-fungous chronic arthritis, hitherto attributed to scrofula, rheumatism, and unknown causes.—*Revue de Chirurgie*, July, 1883.

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SATURDAY, SEPTEMBER 8, 1883.

SANITARY SINS AT RYE BEACH.

There may be a question whether the sins of the moral life of man are atoned for here, or in the world to come. But as regards sanitary sins there can be no doubt: the punishment follows quickly on the commission of the offence. The offender is caught *in flagrante delictu*, and he cannot plead ignorance, or lack of intent, in stay of execution, but is summarily punished to the full extent of the law.

In the recent outbreak of fever at Rye Beach, New Hampshire, we have an illustration of this great truth as complete in all the details, as it is exempt from the usual fallacies. The great facts true of Rye, are equally true of many of the well-known resorts on the Atlantic coast. It is in the highest degree important to ascertain with precision the source and character of the sanitary evils which beset the summer visitor. Nothing less than the clearest and entirely unquestionable exposition of the sanitary evils of seaside and other resorts will suffice, for the proprietors of these places do not exercise their functions with strictly humanitarian considerations. The problem set themselves is, how to obtain the maximum of profit with the minimum of expenditure. Sanitary works are expensive and fruitless of profit. They can realize the duty of providing a proper water supply and suitable drainage, only when the occurrence of epidemics or filth maladies proclaim the unsanitary condition of their establishments, alarm the summer visitor, and stop the inflow of the "almighty dollar." Such a disaster threatens Rye and its annexes. The experience of the present season is ominous. A well-known citizen of Philadelphia — as all the world has been informed—fell a victim to a most obvious sanitary evil created on his own grounds, and others have sickened and died from the same causes at other places in Rye. At numerous other resorts along the Atlantic coast, similar conditions exist; at some of them every year the evil results are manifest, but gradually in all the preparations are making for future epidemics or for the occurrence of filth diseases in an endemic form. We cannot, therefore, be charged with a special animosity against Rye. This beautiful retreat happens for the moment to be an object of attention and solicitude, because of the sad experiences which have startled the public. Others await their turn.

Having had the opportunity for a personal study of the local conditions, and of the resulting diseases, we are able to offer to our readers exact observations, instead of vague impressions. The subject is naturally divisible into two topics: the etiological factors; the pathogeny and clinical history of the disease. We do not exaggerate in any small degree when we affirm that the developments at Rye afford a strong illumination of disputed etiological and pathological questions. Persons in good health going to Rye, drink water plainly polluted, and suffer from a peculiar and distinctive type of fever. Beside the present, there are past experiences of the same character. In all instances, there are peculiarly favorable conditions for ascertaining the cause and for tracing out the results. Every hour of the daily life, and every influence which can affect the individual, can be accounted for.

First, then, we purpose to examine the etiological factors. The summer boarding-houses grouped about Rye Beach, Little Boar's Head, and Hampton are either the houses, as originally built, of the farmers occupying this shore, enlarged to accommodate the guests, or they are newly constructed on the same plan, of the required size, with modifications imposed by the demands of summer visitors. There are also some cottages and a fine new hotel in the Queen Anne style. Some of the last-mentioned structures are provided with drainage into the ocean, just in front of the main building, but the most of them have only ordinary privies, without vaults, or at most only superficial pits. At the beautiful and artistic new cottage just erected, where the cases of fever were most numerous, the sanitary arrangements are entirely modern. The house excreta are discharged into a vault some twenty feet distant. The well furnishing the water supply and the vault are not more than twenty feet apart, and both are thirty feet in depth.

Soon after the use of the water began in June last, it was observed to have a peculiar odor and taste, and presently assumed a milky appearance.

The cases of illness soon began to occur. The peculiar character of the fever which had its origin in these conditions will be set forth in a subsequent issue. The water was immediately suspected, and indeed no fine chemical analysis was necessary to determine the fact of its contamination; the senses of all who approached a vessel containing it were assailed by the pronounced fecal odor. There are odors and odors. The smell emitted by the water of this well smacked of age, and was rather that of an old privy vault than recent feces. The careful investigation then made disclosed the following condition: When the vault had been thoroughly emptied and cleaned, and the house-drainage conducted by pipes into the ocean, the well was pumped out, and the source of contamination looked for. Then it was discovered that a fecal mixture, milky in appearance and consistence, and powerfully offensive, oozed up in quantity from the bottom of the well.

It seems hardly credible that such a material, and in such quantity, should pour into the water-well from a newly-built and very recently occupied vault. A little investigation disclosed a very unexpected source of contamination, which may be responsible for the evil in the present instance. The neighboring property to the cottage above referred to is within a distance of thirty feet, but the well of the former is supplied by a spring nearer the surface of the ground, and is twenty feet in depth. The whole drainage from this cottage is conducted to a manure heap under the stable, and lies on the surface of the ground. Occupied for eight years, the drainage from this cottage has been slowly percolating through the soil during this period, for an inspection of the surrounding vegetation showed that there had been no overflow from the dung-heap. In fact, all the liquid material had disappeared in the ground—in a direction, which seems to be now explained. In digging a new well to the depth of thirty feet, it is probable that communication has been made with a reservoir in which this foulness has been accumulating for several years. An examination of the water of the new well, made several weeks after the adjacent new cesspool had been carefully cleaned, showed that it had lost nothing of its offensive character. It would appear conclusive that the supply of fecal matter from the new and tightly built cesspool, was hardly adequate to keep up the water contamination, and that the real source of the mischief is to be found in the neighboring premises.

In this unfortunate example of bad sanitation, we have an illustration of some sanitary sins now being committed at Rye. Cottages, large boarding-houses, and summer hotels are supplied with water by superficial wells, and common privies and privy vaults exist alongside. That diffusion of such excrementitious matter into wells and tightly-closed cisterns will take place, is a physical fact capable of ready explanation by the laws of adhesion and diffusion, and is attested by the uniform experience of civilized communities. That drinking-water under such conditions may be poisoned, and yet present no evidence of contamination that may be recognized by the senses, is also a fact; but usually on proper examination the presence of nitrates—products of the oxidation of organic matter, and of the various excreta comprehended in the term sewage—can readily enough be ascertained. There is, however, to be drawn an important distinction between sewage itself and certain accidental constituents, as disease germs. Sewage is capable of slowly poisoning the solids and fluids of the body; but for the production of specific diseases, special germs are necessary, for we are not more able in pathology than in organized nature to admit the doctrine of spontaneous generation.

DANGERS OF CANNED FOOD.

Attention is called to the paper by Dr. W. E. Magruder, printed in another part of this journal, giving an account of a case of well-marked lead-poisoning from the use of corn put up in tin cans, and suggesting that this cause of disease may be often overlooked if its possibility is not borne in mind.

When we consider the great extent of the business of canning food, and the large quantities of fruits, vegetables, and meats preserved in this manner which have been consumed all over the world, and especially in this country, during the last twenty-five years; and, on the other hand, remember that in all that time not more than half a dozen cases of disease supposed to be due to metallic poisoning from this source have been reported, it is evident that the danger of such an occurrence must be very small.

It is very fortunate that this is the case, for not only are the commercial interests involved extensive and important, but it touches the food supply of a large and increasing number of people, to whom the use of these canned provisions has become almost a necessity, instead of a luxury, as it was at first.

Several investigations have been made by chemists within the last few years as to the presence of metallic salts in the contents of tin cans, and from these it would seem that most canned fruits contain small amounts of tin. When tin is present in the proportion of half a grain to a pound of canned fruit it can be detected by the taste, but there is no evidence that this quantity of tin is injurious to health. In comparatively large quantities some salts of tin are irritant poisons, but the effect of small quantities does not appear to be cumulative.

The experiments of Mr. Francis P. Hall, reported in the *American Chemical Journal* for March, 1883, showed that in the absence of air, as in sealed cans, vegetable acids have very little effect on tin, or on an alloy of lead and tin. When, however, such acids are placed in ordinary tin cans which are left open, the tinning is rapidly dissolved.

The principal danger of metallic poisoning from canned goods is due to lead. This may be derived either from the tin-plate or from the solder. There appears to be much variation in the amount of lead contained in tin-plate. Traces of lead sufficient to produce the color-test exist in almost all specimens, while the lower grades of roofing or terne-plate contain a quantity sufficient to make cans dangerous which are manufactured from them.

Mr. Hall did not find any cans made from such plate, but there is little doubt that such cans are in the market. It is to the interest of those engaged largely in the canning business to secure a good reputation for their goods, and it is probable that, as a rule, they use only cans made of a good quality of bright plate. The cans made of inferior plate would be more apt to be made for sale to farmers, etc., for domestic use. The danger of contamination from the lead contained in the solder depends upon the way in which the can is made. In a machine-made can by a good and careful workman, the amount of surface of solder exposed to the action of the contents of the can is very small, little more, in fact, than the area of the vent-hole, which must always be filled by solder. In a hand-made can by a careless workman, a square inch or more of solder surface may be present on the inside of the can. Drops of solder may also fall into the can in the process of sealing, and most of our readers must have seen such fragments of solder. If they have not, their cooks have.

It seems probable that time is an important element in the action of the contents of the can upon it, and that cans two or three years old will be much more apt to be eroded than those which have only been put up a few months. The suggestion of the editor of the *Sanitary Engineer*, that every can should bear the date of the year when it is put up, is therefore a good one.

Special investigation is needed to determine the cause of exceptional cases, such as that reported by Dr. Magruder, but it does not seem as if the explanation in this case would be difficult. A cheap can, made probably of terne-plate, the addition of tartaric acid to the contents—probably unskilled soldering—and a body specially susceptible to the effects of lead make up the factors in the case. The moral of it all, so far as our information extends at present, is included in the following:

1. In purchasing cans to do your own canning, do not take a cheap, dull-looking article.
2. When you add an acid it should be neutralized before the article is placed in the can.
3. When the inner surface of a can, or of its cover, is found, on opening, to be corroded or to present a crystalline structure, the contents of that can should be regarded as suspicious.
4. When a can is opened it should always be emptied at once, and not be set aside half-full.
5. In cases of obscure nervous affections look out for lead-poisoning, and bear in mind the use of canned food as a source of such poisoning.

SUDDEN DEATH FROM GOITRE.

In *Langenbeck's Archiv f. klin. Chirurgie* (Bd. xxix. Heft 1), Seitz has an interesting article on sudden death from paralysis of the vocal chords in goitre, which emphasizes the necessity for great watchfulness, and, if need be, of tracheotomy as a prophylactic measure, if there be even the slightest dyspnœa.

The case which he reports is most striking. A young woman of twenty sought his aid, merely with a view to improvement of her appearance. Later evidence, after death, showed that she had had some dyspnœa and cough, but so slight that she did not even name them. Noticing a somewhat altered voice in coughing, it occurred to him that the recurrent nerve might be affected, and he appointed a visit on the next Sunday for a careful laryngoscopic examination. As Seitz dramatically puts it, "der nächste war ein herrlicher Sonntag—das Fräulein eine Leiche!" At three in the morning following her first visit to him, she suddenly stood by her father's bed, pointed to her throat, and, without uttering a sound, fell dead at his feet! The autopsy showed absolutely nothing anywhere abnormal, save that the left recurrent nerve was larger than the right, and was flatter where it was gripped by the enlarged thyroid (which reached to the spine, and had burrowed between the trachea and œsophagus) than it was below.

Sudden death in goitre may follow from bursting of the cysts (if it be of the cystic variety) into either the trachea or the pharynx, by sudden enlargement of the gland, by apoplexy in the gland, by compression of the trachea, either directly by the enlarged gland or by muscular contraction of the overlying muscles of the neck, or finally either by spasm of the muscles which close the glottis or paralysis of the muscles which open it.

Rose emphatically denies the possibilities of sudden death from paralysis of the vocal chords without spasm of the opponent muscles, and it is at least a question whether, in the case of Seitz, the pressure of the tumor was not enough to irritate rather than to paralyze, for it must be remembered that the filaments to both sets of muscles—the openers and the closers of the glottis—run in the recurrent.

Certain it is that spasm of the closers of the glottis may cause sudden death. We have twice seen it in tetanus, so that we should hereafter regard a single urgent attack of dyspnœa in this disease a sufficient reason for instant tracheotomy; and in whooping-cough it is a well-recognized, though rare, cause of sudden death, as well as in pure spasm of the glottis. As to paralysis of the glottis openers, we are disposed to agree with Seitz that that may also be a cause of sudden death. The dyspnœa that follows even paresis of these muscles is well known, and it is highly improbable that in all the cases of sudden death he quotes, in which the recurrent was involved either by incorporation with the tumor or by pressure from it, the lesion only went so far as to irritate, and not to paralyze. A similar mechanical action, blocking the respiratory passages by the air-current's striking loose and flabby nostrils, is related by Linhart. Chloroform was administered to a young girl with a narrow nose and thin nostrils; alarming asphyxia soon set in, and he found that it was due to the inspiratory currents forcing the flabby nostrils against the septum, thus completely closing the nares.

The results of experiments upon animals are conflicting, as Seitz points out, from differences in the anatomical distribution of the laryngeal nerves in the vagus and recurrent nerves; and in those cases in which the branches to the posterior arytenoid muscles are cut, dyspnœa, stridor, and asphyxia follow. Whatever view be adopted, urgent dyspnœa in goitre raises a question also as to the advisability of extirpation of the gland. If it be undertaken, not only must the danger of hemorrhage be encountered, but it may also be suspected that the recurrent nerves are involved either by pressure or direct incorporation with the tumor, or else that the dyspnœa is the result of pressure upon the trachea. The laryngoscope will here give us the greatest assistance.

Finally, there may be dyspnœa and sudden death with no possible assignable cause. Stahl reports a case of a girl, aged fifteen, who had had goitre since two years of age. Acute enlargement of the tumor produced dyspnœa, for which Langenbeck did tracheotomy. Momentary relief being followed by renewed dyspnœa, he carried a flexible catheter to the bifurcation at the trachea, but on the third day the patient died from exhaustion, and no possible explanation for the dyspnœa could be found.

In the same journal, Wölffler, of Vienna, has an elaborate study of the development and structure of the thyroid, which will well repay perusal.

NEW TESTS FOR SUGAR—DIAZOBENZOL-SULPHURIC ACID.

Still another recent test for sugar is diazobenzol-sulphuric acid, suggested by Pentzold (*Centralbl. f. klin. Med.*, June 20). Five cubic centimetres of strongly alkalized urine, are treated with five cubic centimetres of a freshly prepared solution of this substance (1 to 60). Immediately the urine becomes yellow, and remains so if sugar be absent. But if sugar is present, a darker hue and diminished transparency at once appear, and in from three minutes to a quarter of an hour, the color passes over into a beautiful bluish-red, that of a concentrated solution of fuchsin. The froth, if present, is orange or reddish-brown in color, but upon shaking, the color passes over into the same red which the fluid also exhibits in thin layers. This bluish-red color of the froth, may be considered typical of glucose in diabetic urines. A scarlet-red reaction, on the other hand, indicates the presence of acetone. This passes over into blue-red if sugar is also present, but remains permanent if only acetone is present.

In the urine of two diabetics, from which he had considered that the sugar had been removed by the use of iodoform and bromide of arsenic, Korvels (*ibid.*) claims to have proved its presence by this test, when Heller's (Moore's) and Trommer's tests furnished entirely negative results. He has obtained a like result, also, in the urine of a child with fracture of the base of the skull, where Heller's, Trommer's, Fehling's, and Mulder's tests were all negative. Quantitatively $\frac{3}{10}$ of one per cent. of sugar were found in the urine.

A similar reaction is furnished by burnt catechin in acid solution; also by urine strongly charged with acetone as well as glucose, although preceded, as above stated, by a brick-red to scarlet-red color. Solution of pure acetone, or urine to which acetone has been added, strikes only the scarlet-red reaction, while that of sugar is blue-red.

The inconvenience of freshly preparing the solution is obviated by adding to the alkalized urine as much of the acid in substance as will go on the point of a knife. The reaction follows, but not so quickly, so that for delicate testing it is better to follow Pentzold's directions.

The similarity of this reaction with that of the picric acid must strike any one familiar with both. The reaction is probably identical, as both the picric acid and the benzole compound are petroleum products; and it is now likely that more than one of this series may be used as sugar tests.

ARMY AND NAVY EXAMINING BOARDS.

We every now and then hear of candidates passing fair professional examinations before the Government Medical Examining Boards, who are found deficient in general culture, and an impression has got abroad that these Boards are prone to lay undue stress upon the general literary attainments of the candidates, which in turn has an unfortunate influence upon the course of studies they pursue preparatory to coming up for examination. We have recently heard of a case in point, in which a young man passed an excellent examination in ancient and modern languages, and the subjects of a liberal education, but who failed signally in his professional studies. That such a man has capacity is very evident, and he only requires to apply himself to become as well qualified in professional subjects as he is in those pertaining to a liberal education.

We suggest, therefore, that hereafter in the circular-letter which is furnished to candidates, some notice be taken of this circumstance, and candidates be duly notified that while a fair knowledge of ancient and modern languages, and of mathematics, physics, and other subjects of a good preliminary education is required, it must in no way be considered as a substitute for thorough professional training.

REVIEWS.

Dr. John Brown's Spare Hours.

Rarely have we enjoyed a book more than the third series of Dr. John Brown's *Spare Hours*. Its American title is a rather unhappy translation of the author's *Horæ Subsecivæ*, but the "pith and marrow" is just as good under one name as another. The general popularity of the first two volumes is such that *Rab and his Friends* is now an English classic, and few of our readers, we trust, are not friends of *Marjorie Fleming*, with her "Newgate calendar of all the criminals as ever was hung," or are ignorant of the *Mystery of Black and Tan*, or the splendid description of Chalmers, or the loving tribute to his father.

The present recent volume—and we must add the last we shall ever have from his accomplished pen, now, alas! laid aside for ever—contains mostly purely professional papers, and as such will interest us all as physicians.

Most of us would take exception to the genial doctor's conviction "that a mediciner should be as free to exercise his gifts as an architect or a mole-catcher," but all surely will be with him in his plea "for the cultivation and concentration of the unassisted senses. This phrase is the key-note, indeed, to most of the volume. We are apt, amidst our learning and our scientific observations, to forget that the ear, the eye, and the hand are after all the chief avenues of knowledge, and to neglect their finer cultivation in our eagerness to learn the mysteries of all our "scopes" and our reagents. We need the *experientia* as well as the *experimenta*. And it comes with peculiar force from one who is such an exuberant classical scholar that his Latin and his quotations from the older English classics overflow on almost every page.

The paper on Locke and Sydenham will especially well repay an attentive perusal. It places Locke, as an active practitioner of medicine—a fact not generally known—in his true relation to our profession; while his notice of Sydenham—the "Prince of English physicians," such that Boerhave, whenever he mentioned his name, was wont to take off his hat—gives us more of wit and wisdom, of learning and wise precept, than almost any similar sketch we have ever read.

Another quality that is noticeable throughout the book is Dr. Brown's genuine, unaffected piety. His religious nature, like Sydenham's, is always evident, but never obtrusive. It is more a motive than an emotion, and leads to action rather than to theory or mere contemplative enjoyment. His was preëminently a religious *life*, and his profession gave him many opportunities for its practical manifestation.

He has embalmed the memory of more than one "Gideon Gray" in his delightful pages as examples and incentives to modest, conscientious work in rural seclusion. His paper on Dr. Adams, of Banchory, may well put to shame many a man who has means and opportunities, and encourage "country doctors" to believe that in spite of the lack of both they may acquire a generous education. Beginning when a lad of fifteen with seventeen hours a day on Virgil and Horace, each of which he read six or seven times in succession, Adams next read almost every Greek work excepting those of the ecclesiastical writers. Settling in a secluded village, he spent his days in the arduous and useful life of a country surgeon, having the lives, the births, and the deaths of a wild outlying region on his hands. Yet while faithfully attending to such an exacting practice, fighting for a living, and educating a family, he contrived to become "the most learned of Scottish physicians," translated Paulus Ægineta and Hippocrates for the Sydenham Society, besides numerous classical papers, wrote a series of papers on the construction of the placenta, on uterine hemorrhage, on burns, lupus, dislocations, etc., and amused himself at breakfast by translating an ode of Horace into Greek verse!

But our readers must enjoy the book for themselves. It is replete with good-sense and much learning, dashed with not a little genuine humor, and not spoiled by the occasional Scotticisms amidst a charming English only rivalled by that of our own Holmes.

SOCIETY PROCEEDINGS.

AMERICAN DERMATOLOGICAL ASSOCIATION.

Seventh Annual Meeting, held at Sagamore House, Lake George, August 29, 30, and 31.

(Specially reported for The Medical News.)

Wednesday, August 29th, First Day.

Morning Session.

The meeting was called to order by the President, Dr. R. W. Taylor, of New York, who made a few remarks and called for the reading of the papers.

Dr. Piffard, of New York, read a paper on

THE TREATMENT OF ACNE.

Etiology is the main feature to be looked into. The chief physical factors in the production of the disease are already known. One of the commonest in women is disorder of the uterine functions. There are incurable cases of uterine disease accompanied by acne, in which the skin affection is incurable; it is no use attempting treatment. In acute acne, one of the best remedies for internal use is calx sulphurata in minute doses. Bromide of arsenic is also a valuable remedy in the dose of $\frac{1}{100}$ to $\frac{1}{50}$ grain, made into a one per cent. solution in alcohol; one to two minims may be administered in a wineglassful of water. If the stomach becomes upset, its use must be suspended. The sulphide of calcium is most useful in lymphatic subjects, while the bromide of arsenic is suited to acute cases. Locally, some cases do best under early puncture of the lesions followed by the employment of *warm* water, while in other cases simple applications of *hot* water are most beneficial. Sometimes a weak belladonna ointment may be applied at night, or a stramonium ointment, the latter to be made from a fluid extract prepared from freshly gathered leaves.

In chronic acne, sulphide of calcium (calx sulphurata) is to be pushed, beginning with doses of $\frac{1}{50}$ grain and rising. Bichloride of mercury is sometimes of use internally, even where there is no possible suspicion of syphilis. Ergot, the use of which has been recently advocated by Dr. Denslow, of New York, the writer had found useful in practice, although he did not endorse Denslow's theory of its action. The proper dose he had not decided upon, but the drug is by no means a harmless one. Dr. Denslow used it in doses of 20 to 30 minims of the fluid extract. Ergot may also be used to advantage in acne indurata.

Dr. Atkinson, of Baltimore, said that he had never been able to obtain any benefit from the employment of sulphide of calcium.

Dr. Alexander, of New York, confirmed Dr. Atkinson's statement with regard to sulphide of calcium. As for ergot, he had found that of use in diminishing the redness of the skin, but not in removing the lesions. Other members concurred in these statements.

The President, Dr. Taylor, said that in the treatment of acute acne he was accustomed to rely upon the employment of diuretics, *e. g.*, Rochelle salts with acetate of potassium. In indurated acne he employs puncture, also touches the lesions with a solution of pernitrate of mercury together with the application of hot water. He had recently employed a solution of chrysarobin, thirty grains in an ounce of collodium, as suggested by Dr. Fox, of New York. This does not come off on the clothing, and although it necessitates sequestration during its employment, on account of the discoloration of the face, it gives a good result. Internally, he employs Donovan's solution, pushed to 10 or 12 minim doses. Ergot diminishes the hyperæmia, but does not cure the acne. Dilute ung. hydrarg. sometimes produces an excellent effect.

Dr. Stelwagon, of Philadelphia, said that he had succeeded in getting excellent results from a wash of half a drachm each of sulphate of zinc and sulphuret of potassium dissolved in four ounces of water.

Dr. Graham, of Toronto, read a paper on

GENERAL EXFOLIATIVE DERMATITIS,

which he thought occurred more commonly than the literature of the subject would indicate. The writer went on to describe four cases which had come under his personal observation, and concluded by formulating the conclusion that two varieties of exfoliative dermatitis exist, which should be called (1) Dermatitis exfoliativa rubra. (2) Dermatitis bullosa et exfoliativa. The first would include pityriasis rubra and allied forms; the second pemphigus foliaceus.

Dr. Atkinson thought the term "general exfoliative dermatitis" a good one to describe the disease without involving theories as to its nature. Some cases are in all probability tropho-neuroses, while others are more like eczema.

Dr. Geo. H. Fox, of New York, thought that many cases reported as general exfoliative dermatitis and pityriasis rubra are in reality eczema. He himself had seen but two cases of pityriasis rubra, one under the care of the late Dr. Tilbury Fox, in London, and another which he had reported some years ago in an early number of the *Archives of Dermatology*.

Dr. P. A. Morrow, of New York, agreed with the speakers in regarding the affection under consideration a tropho-neurosis. He had obtained benefit in two cases from the use of arsenic.

Dr. Sherwell, of Brooklyn, thought that the designation employed by the writer, Dr. Graham, would not cover the disease pemphigus foliaceus as described by classical authorities in dermatology. He thought the latter a distinct affection which should preserve its distinctive name.

Dr. Piffard also took ground against the conclusions of the writer, maintaining the individuality of pemphigus foliaceus, pityriasis rubra of Hebra, and general exfoliative dermatitis.

The President, Dr. Taylor, described two interesting cases of exfoliative dermatitis, the first occurring as a result of taking quinine in any form, the other in a patient the subject of venereal disease. The latter in its later and chronic stage resembled ichthyosis in its color and appearance.

Dr. Stelwagon read a paper on

IMPETIGO CONTAGIOSA.

This affection, now admitted as a distinct disease by some German authors and attributed to tricophyton and to pediculosis by others, is scarcely, if at all, mentioned by French dermatologists. English and American authors have described it at various times and all admit its individuality with the exception of Hyde, who regards it as the offspring of vaccinia. The writer had had extensive experience in the study of the disease, and having examined above five hundred specimens, he had failed to find any fungus in the fluid of the vesicles and vesico-pustules such as had been described by Kaposi and Piffard. He had found micrococci in the vesico-pustules of impetigo contagiosa as he had in pustular eczema, but he had not found the so-called characteristic fungus except in a very few cases, and then only in the dried crusts. He considers impetigo contagiosa as an exanthematous auto-inoculable disease, naturally acute, but prolonged by auto-inoculation. The disease is: 1. A separate and distinct affection. 2. Not parasitic. 3. Not related in any way to vaccinia. 4. An acute systemic affection.

Dr. Hardaway, of St. Louis, said he had always considered impetigo contagiosa an independent disease; the eruption is typical, and, more than all, it occurs epidemically. If the disease were related to ringworm, impetigo, or vaccinia, we should find it constantly occurring. In reality, it occurs in epidemics. He himself had not seen a case for five years, although his opportunities for observation had greatly increased in that time.

Dr. Atkinson said that he used to think he had a clear and definite idea of impetigo contagiosa. Of late, however, he had seen so many cases of impetiginous eczema occurring in summer-time and readily inoculable, that he felt much more in doubt in regard to the subject than formerly.

Dr. Rohé, of Baltimore, agreed with the writer and speakers regarding the independent character of the disease. He had never succeeded in finding fungus. He did not believe with Hyde that the disease followed vaccinia.

Dr. Fox said that Willan had many years ago described a pustular eruption which was not eczema and was not dependent upon the soil for its inoculation, which he described as "Porrigo." Later, Naylor described the same disease more fully under the same name. Dr. Tilbury Fox described the affection and its epidemic character at length, but unfortunately had given it a new name. The speaker doubted the correctness of Dr. Stelwagon's proposition that the disease is unconnected with vaccinia. He recalled the case of a surgeon who had contracted a typical impetigo contagiosa lesion on the end of his finger by slightly pricking it with a lancet recently used in vaccination. Although pediculosis might not produce impetigo contagiosa *de novo*, the speaker thought it might act in spreading it. The proposition as to the exanthematic nature of the affection brought forward by the writer was new and important.

DR. PIFFARD thought that impetigo contagiosa could not be recognized in Willan's description. Naylor, however, had certainly described it, and he agreed with the last speaker in thinking it a pity that the name porrigo had not been retained. He had had several series of cases under observation, the first member of which in each group was an individual who had recently been vaccinated. While admitting the various points made by the writer, he was still inclined to hold to the fungus theory. He himself had found a peculiar fungus common to vaccinia and impetigo contagiosa, different from that of Kaposi, and unlike any other fungus. Until this should be found in various crusts of other eruptions, he should hold to the fungus view.

THE PRESIDENT, DR. TAYLOR, said that he was firm in his belief that impetigo contagiosa is a disease *sui generis*. He thought it was not a systemic trouble. One proof of this is that the disease always begins locally, as in the face. In sixty cases coming under his notice in a single epidemic, the affection began on the face or about the finger-nails in every instance, the patient afterwards inoculating himself on the body.

DR. STELWAGON said, in reply to Dr. Piffard, that, in five hundred microscopic examinations, he had only found the fungus described by Dr. Piffard five times, and that described by Kaposi ten times. It was in the crust only in every instance.

DR. HARDAWAY said that, in his experience, impetigo contagiosa was quite unconnected with vaccinia. Being public vaccinator in St. Louis, he had vaccinated many thousand persons, and he had never seen impetigo contagiosa result.

EVENING SESSION.

DR. ATKINSON, of Baltimore, read a paper entitled

A CASE OF MULTIPLE CACHECTIC ULCERATION,

Giving an account of a child two years of age, who after some unimportant preliminary symptoms showed signs of itching about the hands and face followed by vesiculation and ulceration. Later a large superficial ulcer appeared on the cheek, nearly covering it from the mouth to the ear. Other ulcers appeared in various parts of the body, and the patient suffered from diarrhœa with emaciation. The eruption was generally ushered in by itching, so that the child bit and scratched the part before the lesion appeared. This was particularly so in the case of one of the fingers, which ulcerated without any sloughing, the tissues seeming to melt away until the end of the finger was completely gone. In some lesions bloody blebs formed at first. Healing took place, finally, in this case with deep scarring. Ergotism, diabetes, and scurvy, could be excluded. The child was well lodged and fed. In recapitulation we have papulation and vesiculation followed by ulceration going through the skin, muscle, and even bone. There was no gangrene in mass, but rapid molecular disintegration. There was loss of power from debility, but no paralysis. Sensibility to pain was probably blunted. There was no symptom of vaso-motor disturbance. The case probably belonged to that class of affections called by the late Oscar Simon "multiple cachectic gangrene." Tonics are demanded in such cases. The prognosis is good, though deep scarring is caused by the disease.

DR. VAN HARLINGEN, of Philadelphia, mentioned a case of spontaneous gangrene of a probably reflex character, which had come under his notice, where patches at first resembling erythema multiforme had eventuated in deep sloughs. This affection occurred in a man who had recently suffered amputation of one of his limbs, and who died shortly after from septic poisoning.

THE PRESIDENT, DR. TAYLOR, mentioned two cases which he had seen, and which were similar in character to those described by the writer. One occurred in a cachectic infant, where a patch of molecular disintegration with red tumid edges and foul ichorous discharge formed on the back, extending over an area of two and a half by four inches, before healing took place, under general tonic and feeding treatment, with great scarring deformity. The second case was that of a nervous woman of thirty, married and childless, who had never taken ergot. Here bullæ formed on the tip of the nose, followed by deep ulceration and a highly deformed scar. At the same time, the fingers of both hands became blue and cyanosed; the pulps of the finger-tips withered in a sort of dry gangrene, finally leaving the attenuated cicatricial points with little more than the finger-nails, giving a griffin-like, claw-shaped appearance to the fingers.

DR. VAN HARLINGEN read a paper on

EXPERIMENTS IN THE USE OF NAPHTOL,

Describing this derivative from coal-tar, a mulberry-colored crystalline substance first introduced into medical practice by Kaposi, of Vienna, who extolled its virtues in various diseases of the skin. The writer agreed with him in regarding it as a remedy of high value in scabies, less so in psoriasis, and useless or harmful in eczema.

DR. FOX said he had used naphtol quite extensively, though not in all the diseases in which it had been recommended. His chief experience with it had been in eczema, where he had failed to get much benefit. In certain cases of eczema of the scrotum and anus, however, it had seemed to act favorably when other remedies failed, and in eczema of the scalp it had also acted pretty well.

DR. HARDAWAY, of St. Louis, had found naphtol of use in eczema squamosum and fissures of the fingers. In psoriasis he had found it inferior to other remedies.

The PRESIDENT, DR. TAYLOR, had employed naphtol in scabies occurring in private practice, with satisfaction.

DR. FOX read a paper entitled

A TRIP TO TRACADIE,

Giving an account of his experience at the leper settlement, where there are at present segregated twenty-four lepers, thirteen males and eleven females. Three cases did not seem to be those of leprosy. The patients are well taken care of, but do not receive medical treatment of any kind. The writer would not decribe the cases at length, as the whole subject had been gone over by his fellow-member, Dr. Graham, who was preparing an official report for the Canadian government. He would, however, make some remarks on the general theory of the disease. The first impression given at Tracadie is that the disease is hereditary, as the lepers almost all bear a few family names in common. These, however, are found to be the family names of the entire community of Tracadie, where the inhabitants have intermarried for generations. The spread of leprosy in communities where we know about it is too rapid to permit the view that it can only be transmitted by hereditary influence. No physician or nurse attending lepers has ever been known to be attacked by the disease. The writer believed that leprosy is transmitted as syphilis is transmitted, by direct contagion. The ulcerative form is, of course, that which is most likely to be spread. He had observed one case in an old woman where the disease had run a certain course, destroying the fingers of both hands, and had then seemingly disappeared spontaneously. He was hopeful of the future discovery of some means by which leprosy could be cured. Even now much has been done in some cases by the internal administration of large doses of nux vomica with inunctions and dressings of chaulmoogra oil.

Dr. Simmons, formerly of Yokohama, who was present, spoke by invitation. He said that his experience, together with the general belief of the Japanese, was in favor of hereditary transmission. He believed that in many cases those accustomed to observing the disease could distinguish the signs of its approach in the countenance of the person long before any distinct objective symptoms made their appearance.

Dr. Sherwell read a paper entitled

PAGET'S DISEASE, OR MALIGNANT PAPILLARY DERMATITIS.

After calling attention to the fact that he had reported some years ago the first case of this affection, which had been published in this country, the writer went on to describe two cases which had come under his observation, and which had presented certain peculiarities different from those described by Paget as characteristic of the disease as observed by him. The writer's conclusions were as follows:

1. Malignant papillary dermatitis presents the subjective symptoms of burning and itching like ordinary eczema, but to a more marked degree, differing in this respect from carcinoma.
2. The objective symptoms, discharge, crusting, etc., are indistinguishable from those of eczema. The color is perhaps more lurid.
3. The "melting away" of the nipple would perhaps be better described as a gradual obliteration.
4. Retraction of the nipple, if this be present, is not to be distinguished from that observed in ordinary cancer.
5. The malignant papillary character is an important point, instantly resolving doubts as to the presence of the disease in question, or that of eczema.
6. In the cases observed by the writer, the duration of the disease was an important point. In one case it was over twelve years, while in the other it was considerably longer than the period assigned by Paget.

Adjourned.

Thursday, August 30th.

Morning Session.

Dr. Morrow, of New York, read a paper entitled

THE PATHOGENESIS OF DRUG ERUPTIONS.

There appear to be two kinds of influences acting in the production of drug eruptions: 1. Constant and typical influences, such as those which give rise to the blebs of cantharides or the pustules of tartrate of antimony. 2. The far from constant influences which flow rather from morbid aptitude in the individual. The internal administration of certain drugs may in one individual produce one sort of eruption, in another a quite different rash, while a third will remain quite unaffected.

Among the theories which have been brought forward to account for the occurrence of drug eruptions, one regards these as the result of the irritation of the drug in passing through the skin, another to the injurious effect of the elimination in its struggle to get out, while a third looks upon these eruptions as the result of elective affinity on the part of certain drugs for certain glands. Behrend holds a peculiar theory of dynamic action, due to the production of a foreign material in the blood by chemical action on the part of the drug introduced into the blood-current. The theory held by the writer, however, was that of neurotic action.

Dr. Taylor, of New York, read a paper on the

POLYMORPHOUS CHANGES OBSERVED IN THE TUBERCULAR SYPHILIDE.

A man of middle age contracted a chancre in April, 1881. No generalized eruption was observed until August, when he suffered from a papular eruption over the body, with mucous patches of the mouth. Under treatment, these lesions disappeared, and no medicine was taken for a year subsequently. In November last, a second rash of large papules came out over the whole body, but no medicine was taken until April of the present year, when the patient came under Dr. Taylor's observation. He then presented an eruption of scaly, psoriasis-like patches, symmetrically distributed over the whole body and scalp. The patient, who was somewhat emaciated, was put upon good diet, and placed under observation, without the administration of anti-syphilitic medication. The diagnosis would at first have been difficult, owing to the very strong resemblance which the lesions bore to those of psoriasis. Degenerative changes, however, soon manifested themselves. The patches gradually assumed a tubercular form, became hypertrophied, raised above the skin, and presented in some cases the appearance of the colloid lesions of lupus, the scaliness meanwhile decreasing greatly and disappearing. Later, bullæ appeared, chiefly on the scalp. This phase soon passed, and some of the lesions took on a rupia-like aspect, while others ulcerated, and others still simply hypertrophied, instead of breaking down. Certain lesions which hypertrophied, ulcerated in the centre, and became covered with thick, conical, rupia-like crusts, while around the edge the epidermis became markedly proliferated, causing these lesions to closely resemble those described and figured by McCall Anderson under the name of psoriasis rupioides. Gummatous ulceration also took place in this case in certain lesions. At the end of seven weeks, when the various manifestations were at their height, mercuric medication was instituted, and the disease disappeared in a short time.

The paper was accompanied by the exhibition of a number of very finely colored photographs, showing the appearance of the disease in its various stages.

Dr. Hardaway said he had recently reported a case of psoriasis rupioides which agreed with McCall Anderson's description. Here the scales piled up so that the lesions presented the conical oyster-shell-like appearance, with a dirty aspect. On removing these crusts, the smooth, flat, moist, red surface of psoriasis presented its characteristic aspect.

Dr. Sherwell, of Brooklyn, read a paper on

PSEUDO-PSORIASIS OF THE PALM.

The writer expressed the belief that, when an eruption of frank psoriasis occurs upon the palm, there is probably a syphilitic taint. He gave a case of a man suffering with psoriasis in whom syphilis appeared. In the course of this, a scaly eruption appeared upon the palm, which was cured by mercurial treatment.

The discussion upon this paper was adjourned until after the reading of the two following papers:

Dr. Alexander, of New York, read a paper on

PSORIASIS OF THE PALM,

giving the history of four cases of unquestionable psoriasis of the palms in which no syphilitic taint existed. These cases were accompanied by photographs showing the exact appearance of the lesions.

Dr. Hyde, of Chicago, who was prevented by sickness from being present, sent a paper entitled

A STUDY OF THE COINCIDENCE OF SYPHILITIC AND NON-SYPHILITIC AFFECTIONS OF THE SKIN,

which was read by Dr. Wigglesworth.

The writer spoke of the assertion which had been made, that syphilis may be mixed with other diatheses, especially in hereditary cases, so that affections which are part lupus and part syphilis, or part psoriasis and part syphilis, may be produced. He went on to give a description of various affections which are met with concomitantly with syphilis, of which the most important is psoriasis, and added a carefully detailed account of a case of psoriasis which had been for five years under his observation, at the end of which time syphilis supervened. The syphilitic eruption ran its course in the same localities as the psoriasis, the lesions being intermingled, but one being relieved by mercury, leaving the other to be afterwards cured by arsenic. The palms and soles were not invaded by either disease.

Dr. Graham, of Toronto, said that he had seen two undoubted cases of psoriasis of the palm where there was no syphilis.

Dr. Morrow said he had until recently agreed with Dr. Sherwell in the belief that psoriasis does not occur in the palms. He had recently had evidence, however, that psoriasis could occur in the palms as a distinct affection, to be distinguished from the palmar syphiloderm.

The President, Dr. Taylor, said that Dr. Alexander's three cases had been seen by him, and the histories examined into with the utmost care, syphilis being certainly eliminated in each instance. In his experience with psoriasis of the hands, the nails are usually first affected. Usually psoriasis may exist for years on various parts of the body before the palms are attacked. He had observed psoriasis beginning about the nails, and then running up to the palms. The tendency seems to be to attack at first those parts of the body where the epidermis is thin and tender, and the palms, where it is thick and hard, only at a later period.

Dr. Sherwell said that in spite of the evidence brought forward for the opposite view, he was inclined to cling to his idea that palmar psoriasis was in fact syphilis. With regard to the elimination of syphilis by Dr. Taylor's careful examination in Dr. Alexander's cases, he thought it not so easy to prove the absence of syphilis. It is much easier to prove the presence of syphilis in any given case than its absence.

Evening Session.

Dr. R. W. Taylor, of New York, read a paper entitled

PECULIAR APPEARANCE OF THE INITIAL LESION OF SYPHILIS.

He had published some years ago, in the *American Journal of Dermatology and Syphilography*, a case in which he had been able to observe the initial lesion of syphilis from its earliest incipiency. A patient presented himself with a lesion which he had observed himself for the first time a few hours previously, and which was in the form of a minute silvery spot, situated within the meatus on a level with, and not in the least elevated above the surrounding mucous membrane, and showing no fissure or other alteration of the surface. Dr. Taylor had watched this lesion, examining it every day for a week, by which time induration had set in and over an area the size of a small pea; the epithelium then fell off, and the lesion began to take on the character of a typical chancre; the usual train of symptoms followed.

The second case was that of a patient who called the day following a suspicious connection. In this case the genital organs were examined daily. On the twelfth day, three silvery pin head spots such as might be made by touching the surface lightly with the tip of a crayon of nitrate of silver, appeared in close proximity upon the glans penis. On the fifteenth day, the lesion had attained a diameter of a line and resembled a papule of lichen planus; general symptoms followed in due course.

The point of interest in these two cases is the peculiar silvery appearance of the lesion, which may be recognized at so early a stage that contagion may be avoided. The appearance mentioned may last two weeks, and may then yield to the typical features of the chancre.

Two other appearances may be presented in the earliest period of the initial lesion of syphilis. 1. A minute, round, excoriated spot like an erosion, generally of a sombre-red color, and not usually the seat of hyperæmia. The further course of this lesion is characterized by enlargement in area and depth. This lesion is sometimes multiple. 2. The *papule sèche* of French writers, usually seen in cases of retracted or absent prepuce. It may run its course without change of character, or it may become indurated with parchment induration.

In children, said the writer, he had often observed the appearance of the initial lesion described above. In one case, an infant presented a pin-head-sized silvery spot on the tip of the tongue exactly as if a crayon of nitrate of silver had been touched to it. Absolutely no change of texture could at first be perceived, but the lesion rapidly indurated, eventually becoming a large mass.

A paper by **Dr. Duhring**, of Philadelphia, entitled

THE VALUE OF A LOTION OF SULPHIDE OF ZINC IN LUPUS ERYTHEMATOSUS,

was read by Dr. Stelwagon in the writer's unavoidable absence. The formula recommended by the writer was essentially as follows:

℞.—Zinci sulphat.,
Potasii sulphuret, . . . āā ʒss.
Aquæ rosæ, ... ℥iijss.
Alcoholis, ... ʒiij.—M.

A few minims of glycerine may be added with advantage in some instances. The use of this wash should be preceded by that of soap to cleanse the surface from crusts, etc., when these are present. Castile soap is usually sufficient, but sometimes the spiritus saponis kalinus may be used in preference. The effect of the wash is cooling. Three cases were adduced to show the effect of the lotion in modifying the action of spreading lupus erythematosus.

Dr. Piffard, of New York, said that what is wanted in lupus erythematosus is cauterization or scarification; nothing less, he thought, would really effect a cure.

Dr. Atkinson, of Baltimore, said that he had seen a case said to have been cured by internal treatment by phosphorus.

Dr. Van Harlingen, of Philadelphia, said that the treatment advocated by Dr. Piffard would be inappropriate in that condition of the disease in which the sulphide of zinc lotion is of benefit. In one of the cases described by Dr. Duhring, which had also come under his notice, there was a certain amount of infiltration and new deposit at certain points, which was of some duration, and superadded to this was an extensive and acute area, more erythematous in character, of recent occurrence. The effect of the lotion was almost magical in removing this erythematous portion. It might be necessary later to use stronger measures in the older portions of the disease. He would refer to the title of the paper which called attention to the value of the lotion in question as an agent in the management of lupus erythematosus. It does not claim to be a cure.

Dr. Wigglesworth, of Boston, said that lupus erythematosus is the opprobrium of dermatology. Last year he had travelled to Vienna chiefly for the purpose of inquiring if any more efficient treatment had been brought into use there, but had been disappointed in finding the old ineffective methods still employed. He had used chrysarobin, as suggested by Dr. Fox, in some cases with partial success, and would ask Dr. Fox what other treatment he could recommend.

Dr. Fox, of New York, said, in answer to Dr. Wigglesworth, that the internal use of phosphorus with the external application of pure carbolic acid had recently been accompanied by success in his hands.

Dr. Stelwagon, of Philadelphia, said that in one of the cases related by Dr. Duhring which had lately been under his care, carbolic acid had been used to no avail, while scarification had given rise to dermatitis without hindering the spread of the disease.

Dr. Piffard said that dermatitis is just what is wanted. He had used Hardy's treatment of a strong ointment of biniodide of mercury, the object of which was to excite dermatitis.

Dr. Hardaway, of St. Louis, suggested electrolysis.

Dr. Van Harlingen read a paper, by **Dr. Duhring**, of Philadelphia, entitled

A CASE OF AINHUM, WITH MICROSCOPIC EXAMINATION.

The case was one of a negro in West Virginia, brief notes being given together with the results of a careful microscopic examination of the specimen by Dr. Wile, of Philadelphia. The examination went to show strangulation of the member by a cord or other means intermittingly employed.

Dr. Sherwell, of Brooklyn, had inquired of patients from Turks' Island who, though not physicians, had observed cases of ainhum, and the testimony had been that the lazy negroes are those who are most apt to suffer from "ring-toe," and that the popular belief was that the deformity was produced from a desire to shirk work.

Dr. Hardaway, of St. Louis, read a paper entitled

A PAPULAR DISEASE OF THE SKIN,

to which he regretted that he could not give a more exact designation. The patients were mostly children, in whom a chronic eruption occurred of dull, lemon-yellow, semi-transparent, pseudo-vesicular papules, of the average size of a small split pea, without areola, slightly itchy, and leaving no scar. Treatment seemed to have little effect, but in some cases spontaneous recovery took place. The eruption resembles the colloid disease of the skin described by Wagner and Besnier, but is a distinct affection.

Dr. Graham, of Toronto, presented, with photographs, a description of a

PECULIAR NEW GROWTH OF THE SKIN OF THE ARM,

occurring in a woman of forty, and resembling elephantiasis or lymphangioma, but of rapid growth, soft, and diminishing greatly in size when the forearm, from which it hung loose and bag-like, was raised. The growth resembled in some respects certain cases described by Dr. S. C. Busey, of Washington. The writer considered the case to be a dermatolytic outgrowth, with dilatation of the lymph-channels. He asked for advice as to treatment; the growth is increasing rapidly.

Dr. Atkinson, of Baltimore, thought he had seen a similar case; he was inclined to regard it as lymphangioma.

Dr. Piffard suggested, in answer to the writer's inquiry regarding treatment, that electrolysis in successive operations should be employed.

Friday, August 31st, Third Day.

A session was held for the exhibition of microscopic specimens, photographs, etc.

The following gentlemen were installed as

OFFICERS FOR THE ENSUING YEAR:

President.—Dr. Robert W. Taylor, of New York.

Vice-Presidents.—Dr. A. Van Harlingen, of Philadelphia, and Dr. J. E. Graham, of Toronto.

Secretary.—Dr. W. Alexander, of New York.

Treasurer.—Dr. George H. Rohé, of Baltimore.

The Association then adjourned, to meet at West Point, on the Wednesday nearest September 1, 1884.

CORRESPONDENCE.

COLORADO FOR CONSUMPTION.

The following extract from a letter of a very intelligent gentleman who went to Colorado a few months ago on account of advanced tuberculosis, will be found to be of interest:

"I am located at present in a log-cabin at the forks of Eagle River and Brush Creek, in Eagle County, Colorado; elevation 6,400 feet, temperature, at present, between 70° and 80°, with rain about every ten days, and very cool nights. This is part of one of the ranges of the Rockies, and snow on the hilltops of the higher levels can be seen. The three-quarter mile wide stretch of level land running for many miles along the Eagle at this point, is abruptly bounded at the other side by great hills with pine growth, and back of them grassy hills and mountains, where the settlers that come here slowly, propose to "range" their cattle, when they get them. Everything is new here; the irrigating canals have not yet been dug, and the sage-brush, with its hordes of venomous mosquitoes and deer flies, grows everywhere except in the bottoms and cleared patches. I was advised by three different physicians of various localities of this State, that if I desired to get the full benefit of Colorado air, I should have to "rough" it on the mountains. After five weeks in Denver, with marked improvement, I started for Leadville, remained a few days, thence to Red Cliff (the end of the railroad), and thence thirty-four miles by wagon, over many mountains, to the present point, the roughest and most distressing ride one can conceive of. Climbing the mountain trail at high elevation taught me that my lungs were touched—adhesions at least; humanity comes to the relief of man and horse, and we stop to rest every thirty or forty yards. Camping out, though well chilled in my blankets, no evil followed. The nearest post-office is Dotsero, twelve miles away, with a stream to ford on horseback.

Life is of the primitive kind here, there is only a step from my cabin to the wigwam. We do our own cooking, etc.—no women for miles. We live on deer, elk, bear, fresh trout from the Eagle (my first weighed three pounds), and my ranchman host sends me with a shotgun for a rabbit for dinner; coffee, butter, etc., come from Leadville, where these and other articles are unusually high-priced. We sleep *in* blankets, a pair of double, with rubber and hay for mattress.

Dressing a piece of fresh meat, or a trout, hanging it up clean and free from impurities, the piercing sun that scorches my hands and face and lips, till I have to keep to the cabin till they heal, simply renders it drier and cleaner, it does not decay. The dead horse by the side of the trail shrinks up in his hide, and does not rot. Small wonder, then, that my bronchial trouble is also drying up. I am slowly but surely getting well without *treatment* or *medicine* of any kind. My sleep is often unbroken, the great daily loss of phlegm is less than one-fourth, and returning strength and courage reconcile me to the great expense and loss to my little family, for I have been positively pulled up by the roots, and transplanted into a *terra incognita*. Looking on the grave with the utmost equanimity, a few months ago, I am now taking measures to dig a ten-foot hole, and secure a ten-and-a-third acre mineral claim at Carbonate, on a mountain twenty miles away, where prospectors are flocking from all sides on horse, mule, and burso, with scant outfit—the rifle and the frying-pan being the most apparent of the accoutrements. The croppings are the same as at Leadville. Many wonderful cures of persons far gone in lung disease, are noted in Denver. It is a bad place, though, on the whole, when heavy hemorrhages are coming from the weakened patient. The poor skeleton lady, for whom we all threw up our car windows one raw morning near Denver, died in a few days after; and I have seen many coffins put on the trains, of which the newspapers of that great and beautiful city say nothing."

NEWS ITEMS.

MONTREAL.

(*From our Special Correspondent.*)

The Laval Question.—Dr. Desjardins has apparently been successful in his mission to Rome, on behalf of l'Ecole de Médicine et de Chirurgie. Bishop Fabre has received a telegram from Cardinal Simeoni directing that the school be allowed to open as usual. There is great rejoicing among the friends of the old school.

BERLIN.

(*From our Special Correspondent.*)

The German Cholera Commission.—In consequence of the cholera epidemic now prevalent in Egypt, the German Government has resolved to dispatch three members of the Imperial Board of Health for scientific researches on the spot.

According to this plan, which is much favored by the German Crown Prince, Privy Councillor R. Koch and Staff Surgeons Gaffky and Fisches will immediately depart for the land of the Pharoahs.

Their professional brethren in Germany, and I dare say in the whole civilized world, bid them a hearty farewell, and hope they will return from their dangerous task in full health and with rich earnings for our science and for the benefit of mankind.

It is impossible not to draw a parallel with the first similar German commission, executed by Messrs. Hirsch, Knessner and Sommerbrodt in consequence of an outbreak of the plague in southeastern Russia in 1878–79. The difference is obvious. On both sides the same ardent zeal, the same intrepidity and self-devotion, but *there* the last rays of a sort of "pen and ink" era, *here* the dawning morn of a modern practical and experimental epidemiology. May it become a bright day!

Yellow Fever at Pensacola.—Since our last report there have been four new cases of yellow fever, and two deaths at the Pensacola Naval Station. There have been no cases in the town.

Ship Island Quarantine Station.—Dr. Finney, in charge of the Ship Island Quarantine Station, states that there are now twelve vessels in quarantine there, from which nineteen cases of yellow fever were taken; all of these cases were brought from Vera Cruz. The Surgeon-General has also been informed that the American brig Hattie M. Bain, which left Havana for Boston, had a case of yellow fever on board. The vessel was disinfected at Havana.

Yellow Fever at Panama.—During the month of July there were eleven deaths from yellow fever among the foreign population at Panama, and the deaths among the poorer classes of foreigners and natives, which are not made public, were more than twice that number. Great difficulty in experienced in obtaining the mortality reports, as it is clear that if they were made public it would be difficult for the Canal Company to obtain laborers, and it might enhance the cost of labor. The employés of the company are so reticent on the subject that it is presumed that they have orders not to give information.

Yellow Fever in Havana.—There were twenty-nine deaths from yellow fever in Havana last week.

Smallpox in New Orleans.—For the week ending August 25th there were twelve deaths from smallpox in New Orleans.

The Cholera Mortality in Egypt.—The cholera epidemic may be now said to be practically at an end. An official report shows that there have been 27,318 deaths from cholera in Egypt since the outbreak of the epidemic.

There have been 140 deaths among the British troops stationed in Egypt.

Insecurity of the Hospital Quarantine Barge Selden.—According to the *Maryland Medical Journal*, September 1, 1883, the Hospital Barge Selden, to which yellow fever patients are transferred on their arrival at the mouth of the Chesapeake, would seem to be very ill-suited for such purpose. The other day the Steamship Caribbean, bound from Kingston, Jamaica, to Baltimore, was detained thirty-six hours at the Quarantine Station, and complaint being made of this the Surgeon-General explained that the quarantine physician had found it necessary to go to Norfolk in order to procure workmen to repair the barge, "which was in a dangerous condition." Capt. Evans, also, the pilot, who was detained on board the barge for ten days on account of his having brought the infected Steamship Californian up the Bay, says that "the barge is in a most dangerous situation with undertow so strong that the stanchions of the lower deck were wrenched from their fastenings; that the roof let in the weather; that the connections of the watercasks were broken apart and all fresh water lost; that the craft is frail and may go to pieces at any moment; that it is surrounded by dangerous shoals and reefs, and is liable to be knocked to pieces by the first nor'easter that comes along; that the barge itself is an unsafe habitation even in good weather, and that patients cannot be safely conveyed to it." Granting that some portion of this picture is overdrawn there is still evidence enough to show that those who are so unfortunate as to be confined to the barge—both sick and well—are subjected to a most unwarrantable risk. Under no circumstances, even to secure the interior from the danger of the pestilence, is it justifiable to place the lives of those subjected to quarantine in peril.

American Gynecological Society.—The Eighth Annual Meeting of the American Gynecological Society will be held in Philadelphia, at the Hall of the College of Physicians, on Tuesday, Wednesday, and Thursday, September 18th, 19th, and 20th. Papers are expected to be read as follows: *Superinvolution of the Uterus*, by Dr. Joseph Taber Johnson, of Washington; *The Importance of Cleanliness in Surgical Operations*, by Dr. R. Stansbury Sutton, of Pittsburg, Pa.; *Some Points Connected with the Subject of Dysmenorrhœa*, by Dr. C. D. Palmer, of Cincinnati; *An Unusual form of Abdominal Tumor—Three Cases*, by Dr. Thaddeus A. Reamy, of Cincinnati; *Is Extirpation of the Cancerous Uterus a Justifiable Operation?* by Dr. A. Reeves Jackson, of Chicago; *A Biographical Sketch of Dr. Nathan Smith, Founder of the Dartmouth Medical College* (being the President's address), by Dr. Gilman Kimball, of Lowell, Mass.; *The Management of Accidental Puncture and other Injuries of the Gravid Uterus as a Complication of Laparotomy*, by Dr. Charles Carroll Lee, of New York; *A New Method of Operating for Fistula in Ano*, by Dr. Edward W. Jenks, of Chicago; *Ergot; the Use and Abuse of this Dangerous Remedy*, by Dr. George J. Engelmann, of St. Louis; *Congenital Fissure of the Female Urethra, with Extrophy of the Bladder*, and *Menstruation after Extirpation of the Ovaries*, by Dr. Henry F. Campbell, of Augusta, Ga.; *Remarks on Chronic Abscess of the Pelvis*, by Dr. William H. Byford, of Chicago. A discussion on *Death after Labor* will be opened by Dr. Campbell.

AMERICAN PHARMACEUTICAL ASSOCIATION.—The thirty-first annual meeting of the American Pharmaceutical Association will be held at Washington, commencing next Tuesday, and continuing four days.

ARTIFICIAL LIMBS FOR SOLDIERS.—The Surgeon-General of the Army has just issued the following circular:

Congress having appropriated a small sum for furnishing special surgical appliances to those disabled in the military or naval service, the coöperation of surgeons is invited in order that this relief may reach the class of persons intended to be benefited.

This office is desirous of obtaining authentic information regarding all existing cases of severe and unusual injuries, and in reporting such, it will be found useful to bear in mind the following points:

1. As no money commutation is authorized, only such cases need be presented as offer a fair prospect of being relieved by surgical or mechanical appliances.

2. Artificial limbs and apparatus for disabled limbs being otherwise provided for, by law, the injuries here in view are almost exclusively those affecting the head, face, or trunk.

3. As trusses are furnished under special legislation, hernia, when not complicated with other injuries, is not to be understood as covered by this appropiation for *special* appliances.

4. As the appropriation is small, it is proper that it be expended only on the most meritorious cases. It is therefore not intended to furnish appliances which are ordinarily within the means of the individual, nor those that are of a character so perishable that it would be difficult to keep up the supply. Regard is to be had chiefly to the severity of the injury, and the ability of the sufferer, unassisted, to procure relief.

THE AMERICAN PRACTITIONER.—Dr. Theophilus Parvin, on account of his removal to Philadelphia, has retired from the editorial management of this journal, and has been succeeded by Dr. John A. Octerlony.

THE FIFTIETH DOCTORATE JUBILEE OF PROFESSOR BUDGE.—The fiftieth jubilee of PROF. DR. BUDGE has been recently celebrated in Greifswald. Prof. Budge was born in Wetzlar in 1811; moved to Bonn in 1842; was made Professor in the University of Bonn in 1847, and was called to his native place in 1855. Among the honors conferred upon him in view of his services to the profession and on the occasion of his jubilee are the Diploma of the Universities of Berlin, of Tübingen and Krakau, and the Medical Faculties of Marburg, Heidelberg, Königsberg, Brussels, Basle, Bern, Zürich, Leipsig, Erlanger, Strassburg, Breslau, Halle, Giessen and Göttingen, and the President of the Royal Leopold-Caroline Academy of Naturalists, prepared and sent congratulatory addresses, as did twenty young physicians who have recently studied in Greifswald. About 700 of his old pupils sent photographs, souvenirs, and congratulatory telegrams. In the evening, there was a grand torchlight procession, ending with "Gandeamus igitur" by hundreds of voices.

A CHAIR OF HOMŒOPATHY.—A homœopathic physician at Vienna has left a large sum of money for the establishment of a homœopathic chair in the Vienna University, but the Austrian Government has declined to accept it.—*Chicago Med. Journal*, Sept. 1883.

NEW MEDICAL JOURNAL.—We have just received the first number of *El Ensayo Medico*, published in Caracas, and edited by Drs. Dorateo de Armos, F. Monroy Gonzalez, and David Lobo.

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending August 25, 1883, indicate that intermittent fever, dysentery, pneumonia, puerperal fever, neuralgia, and rheumatism have increased, and bronchitis and inflammation of the brain have decreased in area of prevalence.

Including reports by regular observers and by others, diphtheria was reported present during the week ending August 25, and since, at sixteen places, scarlet fever at twelve places, and measles at five places.

OBITUARY RECORD.—On Sunday, September 2d, of paralysis, JAMES DOWLING TRASK, M.D., of Astoria, New York.

Dr. Trask was born in Beverly, Mass., in 1821. He graduated in arts at Amherst College in 1839, and received the degree of M.D. from the University of the City of New York in 1844. Subsequently the honorary degree of M.D. was conferred upon him by the Medical College of Buffalo, N. Y. He settled as a practitioner of medicine in Brooklyn, removed from there to White Plains, Westchester County, some years afterwards, and in 1859 he took up his residence in Astoria, L. I., where he practised his profession up to the time of his death. For some time past his health was poor, but he continued to attend to his professional duties until within a few days of his death. He was one of the founders of the American Gynecological Society, and was formerly Professor of Obstetrics and of the Diseases of Women and Children in the Long Island Hospital Medical College. His contributions to medical literature were of marked value, and his very valuable paper on *Placenta Prævia* received the prize of the American Medical Association, and was published in its *Transactions* for 1855. In 1843, he published, in THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES, an elaborate paper on *Rupture of the Womb*, based on a study of over four hundred cases, which is still the best monograph we have on the subject. His last published paper was a very careful study of *Mushroom Poisoning* and appeared in THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES for April, 1883.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM AUGUST 27 TO SEPTEMBER 3, 1883.

WAKEMAN, W. J., *First Lieutenant and Assistant Surgeon.*—Assigned to temporary duty at Fort Sidney, Nebraska.—*Par. 2, S. O. 92, Department of the Platte, August* 28, 1883.

THE MEDICAL NEWS.

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ORIGINAL LECTURES.

SOME DISEASES OF THE FEMALE ORGANS OF GENERATION, CHARACTERIZED BY NEW GROWTHS.

A Clinical Lecture, delivered at the Long Island College Hospital, Brooklyn, N. Y.

BY ALEXANDER J. C. SKENE, M.D.,

SURGEON TO THE HOSPITAL, AND PROFESSOR OF GYNÆCOLOGY IN THE LONG ISLAND COLLEGE HOSPITAL, BROOKLYN, N. Y.

(Reported by EDWARD DEVELIN, M.D.)

(*Concluded from p.* 256.)

HYDRO-SALPINGITIS: DROPSY OF THE FALLOPIAN TUBE.

GENTLEMEN: This specimen which I here show you is the uterus and ovaries of a woman who has borne children, and has had a severe pelvic inflammation. I desire to call your attention to the inflammatory exudation upon the peritoneum, with which the uterus and ovaries are covered, and which so well illustrates the exudation or product of pelvic peritonitis of which I have so often spoken. You will observe that it is a plastic exudation thrown out over and around the uterus both in front and behind. At one point below, however, I can show you a small portion of normal membrane. These shreds which I now hold up on the tenaculum are this plastic material which has become organized. On searching for the ovaries, I find something which might be them, but it does not feel like them, because it is so covered with this exudation. I now find one of the ovaries, which is decidedly diseased, and which looks like a commencing cystic degeneration of this body: you will observe that it is somewhat irregular in shape, it being also modified by this exudation. Now, in my didactic lectures, I have endeavored to convey to you the idea how this exudation produces pressure upon the ovaries, which is here well illustrated. This pressure gives rise to what is often termed ovarian neuralgia.

On turning the uterus over, we now come to the most interesting point of this specimen. Now, passing from the fundus uteri, I find one of the Fallopian tubes immensely distended, becoming more so as we pass up towards the fimbriated extremity—in fact, it is so much distended that it appears like an ovarian cyst. I find it exceedingly difficult to trace this Fallopian tube at its lower extremity, owing to this extensive inflammatory exudation. This condition which we have here, as represented in this Fallopian tube, is that known as hydro-salpingitis, or dropsy of the Fallopian tubes. I believe it to be in this instance the result of a preëxisting salpingitis, some inflammatory process causing a dropsical effusion upon the mucous surface of the tube, filling up and distending the tube, as shown in this specimen.

I had the opportunity of seeing a case of this kind with Dr. Cushing, who had made the diagnosis ovarian dropsy. He aspirated the mass, and found a clear-looking fluid. The question then arose, Had he aspirated a small ovarian cyst or a dropsical tube? The doctor was fortunate enough to be able to verify the correctness of his diagnosis by what you can sometimes do; and that is, he introduced a small probe into the uterus, and succeeded in passing it into the Fallopian tube, whence, by dexterous and gentle manipulation, the probe could be felt through the vagina within the tube. I have also been called in consultation in some cases where this same condition of things has existed, there being a fluctuating tumor discovered in the cul-de-sac of Douglas which has suddenly disappeared upon a gush of this clear fluid passing from the uterus. In one case, this condition existed for two or three years, and about once in three days this fluid would pass from the vagina. We were perfectly certain the fluid came from the uterus, for, on making pressure upon the tumor, it caused it to escape from the uterus, as we could distinctly see. In that case, I tried again and again to pass the probe into the Fallopian tube, but could not succeed, as the distention of the tube occurred at some distance from its entrance to the uterus.

Dr. Cushing aspirated in his case several times, but failed to effect a cure by this means; he finally opened the vaginal wall, incised the tube, and evacuated its contents, and then injected the cavity with iodine, by this means effecting a cure. The wound healed kindly, and the patient was kept under observation for a long time, but there was no tendency to a return of the difficulty.

When all ordinary means fail, and the patient suffers so that her usefulness is markedly impaired, the tube should be removed. Lawson Tait is the great authority on this operation, which is performed in about the same way as ovariotomy.

ATROPHY OF THE OVARIES.

The specimen which I here present to you—the vagina, uterus, and ovaries—illustrates a point which I think well worthy of consideration. You will notice that the ovaries have become atrophied, being about one-third of their normal size; they look like the ovaries of a very old person, and the only reason I have for believing them not to be those from a person of advanced age is that I find the uterus to be almost normal in size, and I am now informed that the woman from whom these were taken was only thirty years of age. This is a splendid illustration of early or premature atrophy of the ovaries. But with this statement comes the question, Did she not have an arrest of development of the ovaries? No; I know she performed at one time all the functions of a perfectly healthy woman, and whose ovaries are normal; I know that she at one time menstruated naturally, this function gradually becoming less, and finally ceasing altogether. The mammary glands were fully developed, as was also the pelvis, and I am informed that the voice was natural.

We have here, then, in this specimen, an atrophy of the ovaries which would be normal if it occurred in a woman at about fifty or sixty years of age, but in this case it is abnormal, occurring at so early an age. You will here observe, on inspecting the ovaries, that there are small scars, indicating that the woman had ovulated again and again, and until the ovaries took on this process of degeneration. Why this degeneration should have occurred I have no means of knowing; it may have been caused by some derangement of nutrition.

I show this specimen to you, however, simply because I know it to be atrophy of the ovaries occurring in a woman only thirty years of age. It also illustrates another point, now a well-established fact, namely, the influence of the ovaries over menstruation; the uterus, you can all observe, was large enough to perform the function of menstruation, but being deprived of the stimulating influence of the ovaries, menstruation at once ceased to exist. This is an exceedingly interesting and rare specimen, from which a lesson of great importance is to be learned.

EPITHELIOMA OF UTERUS.

This patient is fifty-three years of age, is married, and has borne several children. She passed the menopause several years ago, but about one year ago she began to suffer from a discharge from the uterus, at first serous and slightly pinkish in character, which gradually became more sanguinolent; and for the past month or two she has had almost a constant bloody discharge from the vagina, which has been of a somewhat offensive odor. She has also had several attacks of hemorrhage, which have been quite marked. Through all of this, her health has been fairly good, as it always has been, and she has suffered but very little pain. She has been seen by a physician, who discovered the nature of her disease, and sent her to us for treatment.

On making digital examination, I discover that the vagina is not more than two and a half inches long, and I find at its termination an irregular mass which almost fills the middle portion of the pelvis. In the centre of this mass I find an opening, through which I can with some difficulty pass my finger, and beyond that I find quite a little cavity, the walls of which appear to be of the same irregular character, the external or vaginal surface of this mass being quite irregular and slightly soft to the touch, but the structures below its immediate surface are quite dense, the diseased mass itself being immovable under any ordinary pressure.

We have here, then, the physical signs, as obtained by the touch, of epithelioma far advanced. On placing the patient in Sim's position, and elevating the perineum, I find this mass is exceedingly vascular, so much so that touching it lightly produces hemorrhage; in other words, it has all the appearances of this form of malignant disease. So marked are the physical signs in this case that the diagnosis is absolutely certain.

The question of treatment now presents itself to our consideration, and that involves two important questions—First, what is the general condition of the patient? Is it such that she would bear an important surgical operation? This can be answered in the affirmative: her general health is good; she is not yet suffering from the marked cachexia which we see in the advanced stages of malignant disease. So far, then, her condition is favorable to an operation. The next question is, Can we remove this diseased mass with any advantage to the patient? This is a question that, I am sorry to say, must be answered in the negative. Operations in cases of epithelioma can only result in benefit to the patient as a rule when you can remove the entire diseased mass, when you can go beyond it, so that your line of incision will pass through normal tissue. If this can be done, then there are hopes that you will retard the progress of the disease, and, in a certain sense, cure the patient for the time being. The disease may return, but still you prolong the life of the patient, relieve her suffering, and give her comfort. When that is not possible, then the best that you can do is to remove portions of the diseased mass, the benefits to be derived from this being really *nil*. In fact, I am inclined to believe that, in place of arresting the progress of the disease, the probabilities are that you will stimulate it to more rapid progress. There is only one good reason why we are sometimes led to operate in these far advanced cases, and that is when the hemorrhages are repeated and extensive. We can then, by means of the galvano-cautery, remove as much as possible of the diseased tissue, and cauterize that which remains, and so, by lessening the mass of diseased tissue, lessen the liability to hemorrhage for a time; or we may take the curette, and remove all that we possibly can, and then cauterize the base of the diseased mass, and in that way accomplish the same object.

In this case, the hemorrhage has not been excessive, although rather continuous, and I think that we will act the wiser part by avoiding all operative interference. We can, however, control the hemorrhage, and by using the tampon relieve the patient from the inconvenience of this offensive and somewhat irritating discharge. A favorite method of mine in the management of such cases is to employ the tampon of marine lint, allowing it to remain for forty-eight hours or longer before changing it. The effect of this is to produce a little gentle pressure upon the bleeding surfaces, and thus check the tendency to hemorrhage; at the same time, the marine lint absorbs the serous discharge, disinfecting the parts, and so keeps the patient free from the constant discharge, which is at least a great comfort. Beyond this I know of very little that we can do for her, except to give opium if she has pain, and keep the bowels regular, for if she be permitted to become constipated, movement of the bowels will cause great distress. In short, we can only palliate, not cure, in these cases. You will remember how frequently I have cautioned you against the use of opium in painful uterine disease, because of the great tendency to establish the opium habit; but in a case like this, which must sooner or later terminate fatally, it is then right and our duty to relieve the sufferer by the use of opium in quantities sufficient to control the pain.

FUNGOUS GROWTH IN THE UTERUS.

I now call your attention to this specimen of fungous growth which I have just removed from a private patient of Dr. Rand's; it illustrates these growths, which we so often find, and is simply a mass of fungosity, well named. The patient is sixty years of age, and this is the second time I have operated upon her. About five or six months ago, I removed a mass similar to this, which relieved her of the hemorrhage from which she was then suffering. The hemorrhage again returning, Dr. Rand brought her to me, and I operated in the same manner as before. As a rule, these fungosities are benign, are easily removed, and they do not usually return. The line of demarcation between this growth and that of an epithelioma is not easily determined either by the clinical history or the gross appearance of the fungosities; but where it occurs in advanced life, I am always suspicious. Dr. Thallon examined the previous specimen that I removed, and pronounced it epithelioma, and the fact that it has returned so soon favors that diagnosis. While I have seen a hundred or more cases of epithelioma of the cervix, I have only seen five cases where it occurred in the body of the uterus: one of these is recorded by Dr. Thomas in his work, the case coming under my observation at the time. Since that time I have seen four others.

The age of this patient, and the fact that this growth has so soon recurred, makes me suspicious that she is going to develop or has developed an epithelioma. It, however, makes but little difference, so far as the management is concerned; it is good treatment to arrest the hemorrhage by removing the morbid growths with the curette, whether they be benign or malignant.

ENDOMETRITIS POLYPOSA.

This lady now before you is fifty-three years of age, has been married twenty-eight years, but has never borne children. Two and a half years ago, she was operated on for what was diagnosticated endometritis polyposa. She passed the menopause ten years since. She now tells us that she has pain in the back, pain in the left inguinal region, and slight leucorrhœa, which is somewhat sanguineous at times.

Upon examination, I find the uterus in the normal position, as near as I can make it out; but I find it runs off a little on one side as if there was a little fulness above the vaginal junction on the left, as if we might have a little interstitial or subperitoneal fibroid. This uterus I find to be over three inches in its long diameter; so we have here an enlargement of the uterus which is not symmetrical. It is a question whether this increase in size is due to a small fibroid; it is rational to suppose it is; and I might here state that these growths are more apt to occur in sterile women. Even if we have a fibroid there, it would be latent, as they generally subside at the menopause, and waste away with the final involution of the uterus, so that I hardly think the cause of her pain and bleeding is due to that. I would rather be inclined to think that it is a recurrence of this fungosity of the mucous membrane of the organ.

Dr. Stuart informs me that passing the sound causes hemorrhage, which is arterial, so that in all probability it comes from this fungous condition. Now I would venture an opinion that we have a recurrence of this growth which we removed two years ago, and which was at that time supposed to be benign. At this age, it is very probably a commencing epithelioma of the mucous membrane of the body of the uterus. We may, however, remove it by the use of the curette, and examine it microscopically, and see if the structure of the growth agrees with the clinical history. When we have a uterine hemorrhage in a patient fifty-three years of age, it strongly indicates malignant disease; but epithelioma of the mucous membrane of the body of the uterus is rare, and we should obtain all possible evidence before positively making a diagnosis.

POLYPOIDS OF THE UTERUS.

This patient is thirty-nine years of age, has had four children and two miscarriages. For twelve years she has been suffering from menorrhagia. Five years ago she was operated on for this difficulty, but within the past three months it has returned. She had at that time a "vascular tumor" of the urethra removed. The question for us to settle is, why she has menorrhagia. This we will endeavor to do by an examination. I find that she still has the remains of that caruncle of the meatus urinarius, and I have no doubt that has something to do with the pain and tenderness which she complains of, The uterus is slightly larger than normal, and by passing the curette I find that the walls of the uterus are covered with a polypoid material. You noticed that I passed the curette and removed some of this substance, which shows that the hemorrhage is due to these polypoid growths. These we will carefully remove with the curette, and in that way arrest the menorrhagia.

EPITHELIOMA OF THE VULVA.

This case is one of epithelioma of the vulva, upon which I operated some weeks since, and I now bring her before you to show the result of the operation. You will remember that I removed the growth with the cautery at that time.

The patient states that she is feeling well, and you will notice that the wound has almost cicatrized. There is, however, one spot which is not completely healed over, and I am rather suspicious of that point. I am rather inclined to think that there is yet a trace of her old difficulty remaining upon that side. We will, however, await further developments.

LABIAL CYST AND STENOSIS OF THE INTERNAL OS.

This next patient whom I present to you is a married lady aged thirty-eight years, has menstruated perfectly regular, but there seems to be some trouble with the labia on the left side. On examination I find here a labial cyst; Dr. Cushing informs me that he punctured this cyst some time ago, and secured that clear gelatinous fluid from it which is so characteristic of these cysts. These, however, always recur if you only puncture them; in this case it was punctured simply to confirm the diagnosis. When this cyst becomes a little more distended, so that the mucous membrane will be a little less vascular, the Doctor will make a free incision and evacuate its contents, and thoroughly cauterize the cyst-walls with carbolic acid and iodine, sponging it out thoroughly and introducing a pledget of lint saturated with the acid and iodine, until it sets up a suppuration; then, removing it, the suppuration will entirely destroy the secreting membrane. That will be the end of it.

This patient had also another difficulty which Dr. Cushing found on examination. He found she had a true stenosis of the internal os. Now normally the internal os is smaller than the canal elsewhere, but this was abnormally constricted. This is an exceedingly rare condition; it is often spoken of, but seldom met with. When you have a flexion of the body of the uterus, you have an apparent stenosis of the internal os, but if you straighten the uterus itself, you will find the canal is as large throughout as it should be. We do, however, find true stenosis. That such a thing does occur I have demonstrated, not by the use of the sound alone, but by the sea-tangle tent; the normal tissues giving way readily as the tent expands, but at the internal os the resistance was such that the tent, when removed, was found with a line around it, indicating plainly the constriction at the internal os. This was the case here, and Dr. Cushing adopted one of the most reliable means of treatment, which is by gradual dilatation by repeatedly passing the sound. Dr. Cushing here tells me that I am slightly in error upon that point, however, as instead of this means he used forcible dilatation with the small uterine dilator. That is a method which answers admirably also, and as proved in this case; for this lady has now passed two weeks over her regular menstrual period, so that I have no doubt her sterility was due to this stenosis of the internal os. I am satisfied that she is pregnant, for I know of no reason why one who is in such perfect health as this patient should have passed over her regular menstrual period, unless the cause was gestation.

Now in regard to this forcible dilatation I may be misunderstood, and some of you may think I am opposed to this forcible dilatation of the uterine canal from what I have said on other occasions; but I am not. On the contrary, I know it is a safe and reliable method of treatment if carefully performed and not carried too far. It is a very satisfactory way of treating this difficulty. It is a method I adopt very frequently, especially with the external os, and no harm comes from it. But if you carry one of these jack-screws up to the fundus uteri and then forcibly dilate the canal until it is an inch in diameter, you may do harm; this is doubtful treatment, and should be avoided unless you feel disposed to take the consequences, and your patient is similarly inclined.

VASCULAR TUMOR OF THE MEATUS.

(History furnished by Dr. Stuart.) This young girl, seventeen years of age, came to the hospital last Thursday, stating that she was suffering from disease of the sexual organs, and which first made its appearance when she was eleven years of age. This to me was rather a formidable and frank statement for one of her age to make. Upon investigation, however, I found between the labia a flat, bright-red mass not very thick, not much thicker than my finger-nail, very tender and bleeding upon the slightest manipulation. The examination was difficult, owing to the exquisite tenderness, but the growth appears to arise from the meatus urinarius; had been developed slowly, and during its growth it had been subject to the pressure of the labia, which gave it this flat, thin shape; had it not been owing to this pressure it would probably have developed into a circular mass about the size of a pea. She has some pain from urination but not very much; she commenced menstruation when fifteen years of age, this function being perfectly normal.

You see here how perfect this growth is, this is one of the most typical cases I have ever seen of a vascular tumor of the meatus, the caruncle of our books. Here you see I can lift it up, it is of an extremely bright red, contrasting very strongly with the rest of the normal membrane surrounding it.

There are two or three ways of operating in these growths. I will, however, simply seize it with the ordinary forceps, and then draw it forward and make traction upon the peduncle. As I do this, you notice how extremely friable and vascular this growth is, and even with the most delicate manipulation it bleeds profusely; we will now apply the actual cautery to the base of the peduncle; but, even in spite of this, you notice that I cannot entirely control the hemorrhage and am therefore compelled to ligate it just above the point where I used the cautery. The difficulty in removing these growths is this: the moment you seize them they break off, being so friable, and if I am careless in using the cautery, I shall do a great deal of damage, as I shall make scar-tissue around the meatus which in time would cause stricture, and in two years hence she would be worse than she is now; this is why I used the ligature in place of applying the cautery more extensively: I was unable to bring down enough of the normal mucous membrane to make a pedicle, which could be properly divided with the cautery. It is not sufficient to control bleeding to simply touch the surface with the cautery; the blood-pressure will throw out the little coagula which you form with your lightly applied cautery; but when the mucous membrane gives you a pedicle which you can thoroughly cauterize, then it will arrest the hemorrhage, and that is the end of it. When you cannot do that, as in this case, then you will need to apply the ligature; the advantage of the cautery is that it is not very painful, whereas the ligature is quite so. With the cautery, you completely destroy the tissues so that they can no longer ache; but with the ligature, until the tissue dies from pressure, it is extremely painful. This same treatment is employed in hemorrhoids, and we have a chance to study its effects. Now, on account of that tenderness, I am in the habit of using both—ligature and cautery together; ligating the hemorrhoids and then cauterizing them, thus destroying them absolutely.

Now, this case will have to be watched, as the growth may sprout up again; they often do. The pathology is the same as in the mucous polypi. Some little circumscribed irritation sets up a proliferation which goes on growing.

This is one form of the vascular tumors of the meatus, and the rarest of this class.

ORIGINAL ARTICLES.

REMARKS ON THE IMPORTANCE OF HAVING TRAINED NURSES FOR THE SMALLER TOWNS AND RURAL DISTRICTS, AND THE PROPER METHOD OF SECURING THEM.

BY S. D. GROSS, M.D., LL.D., D.C.L.

"Homo sum; humani nihil a me alienum puto."

HAVING long entertained the conviction that good nursing was an indispensable aid to the successful treatment of diseases and injuries, and conscious how little interest the profession and the public felt on the subject, I considered it my duty during a visit I made to Europe, in 1868, to make myself fully acquainted with its various and multifarious requirements. For this purpose, I examined many of the prominent hospitals and training-schools for nurses, and, after my return, embodied the results of my observations and reflections in a report which, the following year, as chairman of a committee appointed at my instance the previous year, was submitted to the American Medical Association at its meeting at New Orleans. The report was accompanied by a resolution, making it incumbent upon the president and secretary of the Association to transmit a copy of it to every State and territorial medical society in the Union, with a view of enlisting their coöperation in the establishment of schools for the training of nurses for hospitals and private families, in accordance with the principles therein advocated.

In order to impart thorough scope and efficiency to this scheme, I suggested that district schools should be formed, and placed under the guardianship of the county medical society, the members of which should make it their business to deliver, at such time and place as might be most convenient, instruction in the art and science of nursing, including the elements of hygiene, and every other species of information necessary to qualify the student for the important, onerous, and responsible duties of the sick-room.

The report bore good fruit; it served to arouse attention to the subject on the part both of the profession and the public, and soon led to the formation of training-schools for nurses in some of our larger cities, and, among others, to the admirable ones at New Haven and on Blackwell's Island, New York; but it failed of its object in the rural districts, where trained nurses are just as much a necessity as anywhere else. In order to recall attention to a matter which every intelligent person must regard as one of vital importance, I offered the following preamble and resolution to the consideration of the Medical Society of the State of Pennsylvania at its meeting at Norristown last May, and to the American Medical Association at its meeting at Cleveland in June:

"*Whereas*, Good nursing is of paramount importance to the comfort of the sick and the restoration of their health, and

"*Whereas*, The subject is one which strongly addresses itself to the common sense and kindly sympathy of every intelligent member of society; therefore,

"*Resolved*, That this Association, fully recognizing the importance of the subject, respectfully recommends the establishment, at every county town in our States and Territories, of schools or societies for the efficient training of nurses, male and female, by lectures and practical instruction, to be given by competent medical men, members, if possible, of county medical societies, either gratuitously, or at such reasonable rates as shall not debar the poor from availing themselves of their benefit."

This resolution, it will be perceived, embodies all the essential features comprised in the one offered at the meeting of the Association in 1869, and I now recur to it with the view of making some practical comments upon it which the medical press of the country has failed to do. Until the present arrangement, by which the Association has a journal of its own, went into effect a few weeks ago, many a valuable paper in its *Transactions* never saw the light of day.

In the first place, I desire to bear testimony to the fact that nursing is not only an extremely useful, but a highly honorable pursuit worthy of the ambition of any respectable person, whether man or woman. Trained nursing is rapidly assuming the form of a dignified profession. It is no longer a menial occupation, but an art and a science. A well-educated nurse must necessarily be a person of refinement and of more or less culture. Such a nurse commands high wages, or, to put it in a more proper way, high fees, is much sought after, and, like the medical attendant, is entitled to the respect and confidence of the family in which he or she renders the service. A nurse often becomes the life-long friend of a patient, and cases have repeatedly occurred in which large legacies have been left for important services rendered in severe and protracted sickness. These remarks are more especially applicable to female nurses, who everywhere constitute the great majority of this class of persons, and in the succeeding discussion I shall, in order to avoid useless repetition, confine myself to that sex.

The chief qualities of a nurse are perfect health, refinement, neatness of person, correct habits, kindness of heart, patience, power of endurance, a good temper, a discreet tongue, good judgment, and alertness of mind. Such a combination of qualities is rare, but where it is present, and has been improved by a rigid course of training, it fulfils the very highest requirements of the sick room. Endowed with such an array of gifts, a nurse is capable of doing an amount of good in combating disease in a degree hardly inferior to that of the medical attendant himself. She diffuses light and courage and sympathy in all her acts and movements, and thus robs disease of half its fears and pangs. An indifferent, poor, or untrained nurse, on the other hand, is too often a source of positive mischief; her want of knowledge is incessantly at fault; she worries and frets not only the patient, but every one around her; everything is out of joint; and, instead of being a blessing, she is too frequently only a nuisance. "For the want of timely care," says Armstrong, the poet-doctor, "millions have died of medicable wounds;" and millions, I am sure, die every year from a want of proper nursing. A good nurse is the right hand of the physician. If his injunctions, in the way of medicine, food, drink, and other necessaries, are not faithfully carried out during the intervals of his visits, how will it be possible for him to combat disease successfully? In many cases, the recovery of the patient is due more to good nursing than to the skill of the physician. When I come to die, let me have plenty of light and pure air in my room, and at my bedside a kind and accomplished nurse, a member, if possible, of that noble sisterhood, the Sisters of Charity, who are doing everywhere such noble work in the interest of the sick and the dying.

The requirements of the sick-room are numerous and diversified, and embrace a knowledge of everything that can conduce to the comfort and recovery of the patient. The first duty of the nurse is to carry out with unwavering fidelity and punctuality the instructions of the medical attendant: this is a sacred duty, and should on no account be departed from, unless unexpected intercurrent circumstances render it imperatively necessary. The relations between the nurse and the patient should be of the most friendly nature. She should move about the chamber, not on tiptoe, but as noiselessly as possible; wear a cheerful countenance, even in impending danger; express herself gently in a few, well-chosen words, and perform every needful duty, however menial or distasteful, with promptness and alacrity. She must not lose her temper or show feeling, even if the patient be unreasonable, fault-finding, or over-exacting, always bearing in mind that these are common effects of disease, and that she must make the best of them. She must not indulge in gossip or tattle, but know and feel that the secrets of the sick-room are sacred.

I would lay great stress upon what I regard as the æsthetics of the sick room—a word which to me has a very high significance. The dictionary defines æsthetics as the science of the beautiful—the beautiful in nature and in art. The sick man's chamber has rarely about or in it anything of the æsthetic; on the contrary, it is generally disgracefully unæsthetic; in a state of confusion worse confounded; one thing here and another there, where they have no business to be, if they be not indeed a source of positive annoyance. Nothing can be more disgusting than to see half a dozen vials and pill-boxes piled upon the table or bureau directly under the patient's eye; a plate, cup, knife, or spoon here or there; a soiled napkin on the bed, or on the wash-stand; a slipper out on the floor, or a chair, stand, or some other piece of furniture out of place. Such disorder cannot fail to make a disagreeable impression upon the patient, and is a disgrace alike to the nurse and to the medical attendant. Each should aim to produce the most agreeable impression upon the poor sufferer. It is bad enough to be sick, but to be shut up, perhaps in a small, ill-ventilated room, filled with unpleasant odors and distasteful surroundings, is unbearable, and little short of a crime.

The educated nurse must have a competent knowledge, 1st, of the general principles of hygiene; 2dly, of the effects, doses, and modes of administration of the medicines in most common use; 3dly, of the nature of food and drink, and the proper methods of preparing them for the sick; 4thly, of the different poisons and their antidotes; 5thly, of local remedies, as leeching, cupping, blistering, bandaging, poultices, lotions, antiseptics, and ointments; and, 6thly, of the manner of handling the patient, of making up his bed, and of changing his body-clothes. If, superadded to this knowledge, a nurse can have some idea of the nature and treatment of the more common diseases, very well, but such knowledge is by no means indispensable. A little knowledge is here, as everywhere else, often a dangerous thing. Dr. Rush used to tell his students that no physician should be permitted to engage in practice unless he had served six months in the kitchen, so important did he consider a knowledge of the art of cooking.

To educate nurses for the rural districts and villages, all that is necessary is to establish a central office or bureau at every County Town in each State and Territory, and to place it under the charge of its medical society, which should select two or at most three of its members to give the necessary instruction. One, for example, might take charge of the various matters comprised under the head of requirements of the sick-room, including hygiene and the nature and preparation of food; another, the mode of examining the patient as to the condition of his tongue, pulse, countenance, skin, temperature, posture, and excretions; the mode of administering medicines, their doses and actions; poisons and their antidotes; while a third might busy himself with surgical, obstetrical, and gynecological appliances and dressings, including the treatment of hemorrhage.

Where no county society exists, the same object may be attained by the banding together of any two or three competent physicians in the place. Notice of the time and place of meeting should of course be given in the public prints, and also by card. A small matriculation fee should be charged, and also, where possible, a small fee for each of the instructors, to assist in defraying expenses. The teaching should be as practical as possible—essentially practical—each pupil being obliged to perform her work in the presence of her instructor, not once or twice, but again and again. Free use should be made of the blackboard. The outfit of such an establishment need not exceed fifty, seventy-five, or, at most, one hundred dollars. There should be frequent examinations, and at the final one a certificate of competency should be awarded to the successful candidates.

If the plan now suggested be faithfully carried out, as I confidently believe it may be, either as here presented, or with such modifications, changes, or alterations as circumstances may render necessary, it cannot fail to be instrumental in saving many lives, in preventing much suffering, in inspiring hope in the sick, and in imparting confidence to the professional attendant. If this plan succeed, I shall feel that I have accomplished the greatest work of my life.

To aid the pupil in her efforts at acquiring knowledge, she should avail herself of a proper text-book. Of this class of works I have now six lying upon my table, and, after a careful examination, give the preference, as to completeness, to the *Hand-Book of Nursing*, published under the direction of the Connecticut Training-school for Nurses. *A Manual of Nursing*, prepared for the Training-school attached to Bellevue Hospital; *Anderson's Lectures on Nursing*, and *Cullingworth's Manual of Nursing, Medical and Surgical*, are also excellent productions, worthy of a place in the library of the nurse and of the physician. Any of these books may be obtained of Blakiston, Son & Co., 1012 Walnut Street, Philadelphia, at one dollar a copy. *A Manual for Hospital Nurses* has been issued by Mr. Edward J. Domville, of London, and is now in its fourth edition; and there is a brochure, entitled *Notes on Fever Nursing*, from the pen of Dr. James W. Allan, of Glasgow, reprinted in Philadelphia. Much valuable information will be found in the *Notes on Nursing*, by Miss Florence Nightingale, published soon after her return from the war in the Crimea, where she earned so much glory by her efforts to assist the sick and wounded.

I could wish that this paper, imperfect as it is, could be widely disseminated, in order to arouse the attention of the profession everywhere to the importance of the subject of which it treats. Unless this be done, and it can be done only through the aid of the medical press of the country, it will signally fail of its purpose.

A HYPERTROPHIED RIGHT LOBE OF THE LIVER MISTAKEN FOR A FIBROID TUMOR OF THE OVARY.

BY JOHN L. ATLEE, M.D.,
OF LANCASTER, PA., LATE PRESIDENT OF THE AMERICAN MEDICAL ASSOCIATION.

MISS A. E., a single lady, aged about 39, who for many years has been a teacher in our public schools, consulted me four or five weeks ago, soon after the school vacation commenced, about a tumor which was developing in the lower portion of the abdomen. She had always menstruated regularly, and with the exception of slight dyspeptic symptoms had always enjoyed good health, and never missed a day from her school. Within the last three months, however, she found herself becoming more and more emaciated and had an unusual feeling of debility. Her color was good; tall and well-formed, with always a good appetite and generally regular bowels, but occasionally had some diarrhœa, and some pain like colic, for which she required an anodyne.

Upon examination I found a hard tumor occupying the centre of the hypogastric region, extending as high as the umbilicus and to the iliac regions, especially the right. It was very hard, but slightly movable from side to side, and this movement did not influence the uterus. The brim of the pelvis on that side was occupied by the mass, although it did not descend into the pelvis. Her waist was of the normal size, with no bulging above the umbilicus. She was sensible that it was increasing rapidly, and wanted relief. I diagnosed a fibroid tumor of the right ovary, and if she wanted to be relieved I would operate.

After the usual preliminary measures had been carried out, and the exhibition of the anæsthetic, I commenced the operation at eleven o'clock A. M., August 22d, in the presence of Drs. Atlee, Jr., Ehler, Welchans, Roland, Rohrer, and William A. Atlee, Jr., and Mrs. Dr. Wilson and her student, by the usual incision in the median line, and exposed the peritoneum, which was dark and very vascular; upon laying it open there was a small escape of ascitic fluid and behind it was a large, chocolate-colored mass, very firm and slightly nodulated, which proved to be an enormous right lobe of the liver! I passed my fingers up and felt the left lobe with its sharp edge, soft, and apparently healthy. Whether it was wearing a tight corset, or from some other cause, the morbid development was towards the pelvis, as above the umbilicus there was nothing to indicate the presence of a tumor. Here was a dilemma which brought the operation to an abrupt conclusion, and the only thing to be done was to close the wound very carefully and put the patient to bed. I think it is a case of encephaloma, not yet fully developed, in the lower lobe of the liver.

I have never, in all my diagnostic experience, been so completely deceived, and I hope your readers will profit by my mistake. It is often in that way we gain our knowledge.

LIMITATION OF INFECTIVE DISEASES, WITH SPECIAL REFERENCE TO PROPHYLAXIS.

By EZRA M. HUNT, M.D.,
PRESIDENT OF THE AMERICAN PUBLIC HEALTH ASSOCIATION.

THE cure, the limitation, and the prevention of disease are so allied to each other that the physician and the sanitarian are excusable for not being very anxious to define with accuracy how much belongs to the particular sphere of each. In each there are so many things we do not know, that some are very much inclined to doubt as to the certainty of what we do know, or to discredit our ability of control. While it is desirable in every case to understand causation, we are not to forget that great progress can be made in actual practice, both preventive and remedial, when we may not be fully able to explain the causes of the disease or the *modus operandi* of the remedy. Those who are most accurate in their knowledge as to results, are the ones most likely to seek for and ascertain causes. The ability of quinine to cure ague is not disputable, because we are not sure how quinine acts. The one who witnesses its action will be most inquisitive as to how it acts. Of late years we have been inquisitive of etiology, as if all progress in treatment were dependent thereupon. Surely we would neither discourage nor underestimate this radical method of advancing both science and art. But in the mean time we would remind ourselves of the substantial progress that has been made, especially with those diseases which tend to become epidemic. While not having all the details of relation between filth and specific contagions, it was a great advance when we came to be impressed with new definitions of cleanliness, and to insist upon it in details, as a part both of the prevention and treatment of disease.

There can be no question that the growth of professional sentiment as to the need of dealing with all surroundings, and with all that relates to the surface of the individual to the degree of technical and enforced cleanliness has made a great advance, both in the limitation and the treatment, especially of communicable diseases.

Our next confidence in our power to prevent the spread of disease, has been in the appreciation of what thorough *isolation* means, how it can be accomplished, and how effective it is in controlling the spread of contagions. In all well-regulated communities, and in all well-informed professional minds, it at once provides for the patient on a separating basis, by immediate hygienic conditions, dilutes or disintegrates the materies morbi, and protects others therefrom, while it is afforded the best opportunity to hasten through the stages of its ephemeral vitality. It has thus become an essential of professional duty to know accurately how to carry out this isolation, how to enforce it, not only as to persons, but their fomites and secretions. It has not only aided us to identify the dejections of cholera and typhoid fever as conveyancers of the contagion, but led us to study the respective distances at which various diseases are communicable, and to have in the aggregate quite positive information and very satisfactory results from the application of the system. It can almost be said that the physician who understands this and the practical application of hygienic methods, scarcely fears that cholera, typhoid fever, scarlet fever, etc., will assume an epidemic character. But the details are often difficult of enforcement.

Another principle that has not been enough enforced is that, in order to secure immunity from attack, it is as *feasible* to deal with individuals as it is with surroundings as a means of preventing the spread of disease. In a sense, there is a difference in inside as well as outside cleanliness among individuals as among places. Nay, more, the old experience as to inoculation, after due preparation of the system, shows at least that the virulence of a disease can be modified by preliminary care. The contagions seem to find much more to feed upon or to fructify them in some than in others. There is reason to believe that this difference is not beyond the reach of human ken, and that the principle of individual sanitation will come to the aid of other practices for the amelioration of disease.

But we are glad to see a still more important principle than either isolation or personal cleanliness now being pushed into prominence.

A communication and an editorial in THE MEDICAL NEWS have recently and forcibly presented this idea. It is a little strange that Prof. Binz and others who have had similar views as to the action of quinine had not sooner conceived the idea that not only it, but other medicaments might be applicable in the direction of systematized prophylaxis. So soon as we began to come to some definiteness of knowledge as to wherein consists the specificity of some of the contagions, it was very natural to inquire whether we could not, in some way, interfere with the decomposition or the fructification of the plant or animal life before it had those critical manifestations which constitute the disease.

So long ago as 1877, the author of this paper presented to the American Public Health Association, at Chicago, a memorandum as to "*The Sanitation of Individuals with Reference to the Arrest of Infectious Diseases.*" It proposed to deal "with unattacked members of a household in such a way as to render them unsusceptible to the invasion of disease, or so far forestall its attempted derangement as to render it tractable." The idea suggested was "to introduce into the avenues through which contagions chiefly entered, or into the blood on which their first changes are wrought, such substances as will prevent incubation, or enable the blood to resist the changes which are sought to be made, and which constitute the formation of the disease."

Quinine, potassium chloride, and ferrum chloride were among the substances mentioned. The claim was not that of specific action, but that these and other substances could be so introduced into the system as, for several days, to keep up a constant presence about the fauces and in the circulation which would antagonize the processes which infected particles seek to set up, and which constitute the gravity of the disease. These views were the result of closely observed experiments with diphtheria and scarlet fever and intermittent fever, and were well known to families and to physicians in the section in which the practice had been initiated on a scale as large as a few virulent outbreaks in the practice of one individual would permit. When the yellow fever broke out at Memphis, communication was immediately had with Surgeon J. M. Woodworth, of the U. S. Marine Hospital Service, and he expressed his full intention to apply a definite plan of preliminary saturation which had been proposed. These views so impressed Prof. J. L. Cabell, of the University of Virginia, that, in his address before the American Medical Association, in 1878, he made allusion thereto.

A more elaborate outline of evidence was furnished in a paper presented to the American Public Health Association, at Richmond (1878), entitled, "*The Prophylactic Treatment of Individuals as a Means of Preventing Epidemics of Yellow Fever or other Infectious Diseases.*" It was claimed that the most hopeful method of preventing infectious diseases from becoming epidemic was in thus dealing with all exposed persons. In addition to other articles before named, salicylic acid, arsenic, alcohol, sulphurous acid, and some sulphites and chlorides were named.

In view of the more recent reference to the subject, we desire to call the attention of the medical profession to the need of an extended and systematized testing of the methods advised. We already have had as to quinine a prophylaxis of the individual which should make us intensely hopeful as to all infective diseases received from without. Such testing would necessitate the accurate administration of the medicament to the extent of a local presence in the fauces and an ascertainable presence in the blood during the usual period for the incubation of the disease, and even longer where there is continuous exposure. After the first effect has been reached, it is quite surprising how very small doses, if frequent, will maintain the presence in the blood of certain articles. Potassium chloride, for instance, is not only found in the secretions soon after administration, but is easily continued in them by small doses. The same is very true of quinine, of chloride of iron, arsenic, etc. Every advance in our knowledge of the infective diseases points to the development and growth of lower forms of life. We shall yet know how in many cases so to sterilize the human soil that it will refuse to give productivity to that which constitutes the gravity of the disease. If so, we shall have a method for the stamping out of epidemics second to none of those now in more recognized operation.

MEDICAL PROGRESS.

Alcohol in the Treatment of Burns.—Dr. E. Nelasco, in *le Practicien*, gives the following as the method successfully employed in a number of cases of burns. After having bathed the raw surface with alcohol (96 per cent.), he covers it with wadding, which is soaked with alcohol whenever it becomes dry. The pain ceases immediately on the application. In the most unfavorable cases the recovery was prolonged to the eighteenth day, while in the parts in which there was no deep injury, healing, without suppuration, took place on the third day, leaving no trace of the injury. —*L'Union Méd. du Canada*, July, 1883.

Cirrhosis of the Liver of Cardiac Origin.—M. Ch. Sabourin, in an article on this subject, gives the following as the only conclusions that can be drawn: 1. Diseases of the heart may produce a true cirrhosis of the liver. 2. The seat of this cirrhosis is the subhepatic venous region. 3. As sections show, it tends to form complete rings passing around the subhepatic veins—rings which enclose the glandular spaces at the porto-biliary centre. 4. By its histological nature and elementary evolution, it possesses and retains characteristics which permit its ready recognition. 5. It constitutes an important anatomico-pathological element in the history of diseases of the liver; this element gives the peculiar stamp to the hepatic cirrhosis of cardiac origin.—*Revue de Médecine*, July, 1883.

Subcutaneous Ligature of Varicose Veins.—At the meeting of the British Medical Association, recently held in Liverpool, Mr. W. H. Folker read a paper on this subject. Formerly, he adopted the method of treatment by potassa fusa and lime eschar, but at present he only uses the ligature or suture. Either of these, which are applied merely till a clot is produced in the vein, and then removed without completely dividing it, he considers not only unreliable, but dangerous, as the clot might subsequently become loose, and be carried up the vein.

Whatever method is adopted, it is absolutely necessary that a complete division of the vein should be effected; but, that accomplished, he thinks the more formidable operations of slitting up or dissecting out portions of the vein are then quite unnecessary. A hare-lip pin passed under the vein, with silk twisted over it, is effective if allowed to cut its way through; but it is clumsy, and also very uncomfortable to the patient to have three or four needles in his legs, with the cut ends projecting, however carefully they may be dressed. The brooch with pad and screw only serves to stop circulation in the vein till a clot is formed; but it does not sever the vein completely, and is, therefore, not to be depended upon.

The plan which he now proposes to bring before the profession is that of subcutaneous ligature of the vein; it will be found safe, efficacious, and very simple and easy to apply. It is safe; for the ligature is applied with the slightest possible disturbance of the surrounding parts. It is efficacious, as it completely stops all circulation in the vein for ever afterwards; and the operation is extremely simple and easy to be performed.

A very small incision is made on each side of the vein, of the width of a tenotomy-knife. The ligature is then passed under the vein with a curved needle, which is made to enter at one incision, and is brought out at the other and withdrawn, leaving the ligature *under* the vein. The straight instrument, which is just sharp enough to go through fat and cellular tissue, but not sharp enough to endanger a vessel, is passed from one incision to the other between the skin and the vein; it is then threaded with the ligature, and withdrawn. The ligature now encircles the vein, with both its ends through the first incision. It is tied as tightly as possible, and the ends cut off closely. If a spot of blood remain, it is to be sponged away, the skin dried, and the incisions pencilled over with collodion, and the operation is complete.

Of course he does not pretend to say there is anything new in tying a varicose vein subcutaneously, though he wishes to suggest its more general adoption, as being thoroughly effectual; and by using the little instrument devised for the purpose, the operation may be performed in the easiest manner possible, even by any one not much accustomed to operating. There is nothing unsightly for the patient to see; and the part may be easily and comfortably dressed.

This last may be considered by some a trivial matter, but many of the patients will be induced to submit to this, who would be frightened at the idea of a cutting operation.

Mr. J. R. Humphreys (Shrewsbury) said that he had applied the various methods for the relief of varicose veins, and amongst them the method of subcutaneous ligature; but of late he had cut down on the vein, and tied it below and above, about an inch apart, and cut the intermediate portions. He had had some troublesome cases of varicocele which he had readily cured by this means, and had no bad result.—*British Med. Journ.*, August 18, 1883.

Operation for Determining the Sex of an Individual.—In November, 1882, a person, æt. 22, came to Prof. Porro for the purpose of having the sex determined. This person had been brought up from infancy as a girl, but all proclivities and instincts had been masculine. The height of the individual was five feet two and a half inches; weight 130 lbs.; the features masculine, with a few black hairs on the face and upper lip. The thorax was that of a man, the breasts developed similarly to those of a young girl, but the nipple was non-erectile. The abdomen was flat, but the conformation of the pelvis was similar to that of a woman. The arms were those of a man, but the lower limbs of feminine conformation.

There was a penis very slightly prominent; the pudental region, when the legs were brought together, resembled that of a woman. There was a vulva with a slightly developed clitoris, the glans of which extended only six-tenths of an inch beyond the prepuce. At the base of the glans were two folds of mucous membrane resembling labia minora; these being separated, the examiner found a canal about one and six-tenths inch long which extended from the base of the glans to an opening in the median line, about two and two-fifths inches from the anterior margin of the anus. This led to another canal, one and four-fifths inch long, which opened into the bladder.

Two cutaneous folds of larger dimensions than those already mentioned, but parallel to them, were found on either side of the peniform body. They were covered with hairs, and were similar to labia majora. At their upper part, two hard bodies were felt at the ring near the inguinal region, pressure on which caused no painful sensation. Rectal touch gave no evidence of the existence of a prostate, nor was any uterus discovered.

On December 9 Prof. Porro opened the genito-crural fold of the right side, and found that the hard body was the testicle with the epididymis. The spermatic cord was present, and attached to the testicle. A few catgut sutures and a Lister dressing were applied, and five days afterwards the man left the hospital. [This operation is somewhat similar to one reported by Prof. S. D. Gross in The Amer. Journal of the Med. Sciences, Oct. 1852, which was more thorough, however.]—*L'Abeille Méd.*, Aug. 27, 1883.

Action of Lead on the Vagus.—Curci, after some physiological experiments on the subject, states that lead salts have an irritating action on the vagus. They act at the same time on the inhibitory centre of the heart and on the terminal intracardiac branches. Under their influence, the heart-beats diminish in frequency, and become intermittent. The systolic bruit is also diminished in duration while the diastolic bruit is prolonged.—*Gaz. Hebdom.*, Aug. 17, 1883.

Case of Horny Tumor on the Cheek.—At a meeting of the Calcutta Medical Society on July 11th, notes of the following interesting case were read: Bhondu, a fuller, was admitted into the Rai Bareli Sudder Dispensary on the morning of 29th July, 1882, with a peculiar tumor on his left cheek. His previous history is that about eight years ago he first felt a hard, painless swelling come on in his left cheek, just near the angle of the mouth. For the first few months he took no notice of it, simply because it did not trouble him, but after the lapse of some more months, it became double its size and very unsightly. He thereupon consulted a barber-surgeon, who applied some medicine, and a fortnight after its use, a thin layer of skin, as the patient says, peeled off its surface, leaving exposed to view a hard, white swelling like a horn in structure. No medicine had any effect in checking its progress, and four years after it was first noticed, it became about two and a half inches long. He again went to the barber, who sliced off the projecting mass with a razor. He (the patient) could still feel a hard plate sticking as if it were in his cheek. Some time after, it again attained its former size, and he had it again cut off by the barber. The last operation was performed about two years ago. The tumor has now again increased in bulk, and is larger than it ever was before. From the very beginning, it has been perfectly painless, the only source of inconvenience and anxiety being its size and presence on the face.

Present state (at time of admission). There is a pyramidal mass projecting out of the left cheek. It is about three inches in length. The apex is a cut, triangular, uneven surface, about one inch square, having rather a constricted neck. Its thickness is much greater towards the base, which is embedded in the substance of the cheek. On running the finger over the base from within the mouth, a hard substance is felt, as if it were sticking in the cheek. Its circumference is about three inches. Pressure upon the tumor from within or without the mouth does not give any pain, and the whole thing looks exactly like a horn on a man's face.

Treatment.—The tumor was dissected out. It was found to be embedded in the whole thickness of the cheek, and the mucous membrane of the mouth was, in the course of dissection saved with great difficulty. The after-treatment was carbolized lint, and on the 12th August, 1882, fifteen days after the operation, the man was discharged cured, the wound having filled up with granulations.—*Indian Medical Gazette*, August, 1883.

Uraguara.—M. P. Merlini reports several cases in which the tincture of uraguara (*Didinamia angiosperma*) has been successfully used in chronic bronchial and pulmonary diseases. The first patient had symptoms of pulmonary phthisis; after three months and a half of treatment, there was only a slight vesicular murmur. The tincture is prepared from the leaves or from the bark of the root, and is given in doses of gtt.v.-xx three times a day, before meals, in a glass of water. The tincture is well borne by the stomach, and a continuous use during several months produces no digestive troubles. It causes an increase in the appetite and an improvement in general strength. Merlini states that in several cases in which cod-liver oil, iron, lime salts, etc., had given no improvement, he obtained excellent results with the uraguara.—*Progrès Méd.*, August 18, 1883.

Extirpation of the Uterus.—Bölling, of Upsula, reports the case of a woman, æt. 57, upon whom he performed colpo-hysterectomy in July, 1882, on account of cancer. The growth had become attached to the anterior roof of the vagina, and the bladder was torn when the cervix was removed, but was immediately sewed up. The uterus was removed through the posterior part of the vagina. The broad ligaments were separated and ligated, and the ovaries left in the pelvic cavity.

By sutures in the corners the wound was entirely closed with the exception of an opening about as large as a finger, through which a drainage-tube was inserted. The vagina was then tamponed with iodoform gauze, and the patient put to bed. There was no rise of fever.

Recovery went on uninterruptedly, with the exception of a vesico-vaginal fistula, which, however, closed spontaneously in five and a half months, at which time the patient was still free from recurrence of the disease. Examination of the uterus showed that the internal os was involved.—*Centralbl. für Gyänkol.*, Aug. 4, 1883.

The Seat of Urea Formation.—Dr. Shroeder has recently performed some interesting experiments on this subject (*Kleb's Archiv*, t. xv.). He constructed an apparatus by means of which the blood of the animal experimented upon was caused to flow through certain organs, the liver, kidneys, etc. Notwithstanding a continuous circulation of two hours or more through the liver, the blood always contained the same amount of urea at the end of the experiment. The liver is therefore, in Shröder's opinion, the urea forming organ *par excellence.*—*Gaz. Hebdom.*, August 24, 1883.

Precautions for Persons attending Cholera Patients.—The Board of Health and Public Hygiene of the Department of the Seine has issued the following circular, presented by M. Dujardin-Beaumetz: Persons having the care of cholera patients, or who live with them, should observe the following rules: They should neither eat nor drink in the chamber occupied by the infected person. Before eating or drinking, they should rinse out the mouth, and thoroughly wash the hands and forearms with a two per cent. solution of borax. They should bathe the whole body every day with water containing ʒiiss of borax or grs. xv of thymic acid to the half gallon.

Whenever any fecal or vomited matters soil the clothes, they should be immediately washed with a solution containing ʒv of sulphate of copper to the half gallon of water, or with boiling water. When the clothes are extensively soiled, they should be placed in a closed apartment, where ʒijss of sulphur must be burned for every cubic yard. The clothes should remain in this place for twenty-four hours.—*Progrès Méd.*, August 18, 1883.

The Perspiration in Healthy and Nephritic Subjects.—From a number of experiments upon himself and other men, Dr. Janssen, of Leyden, draws the following conclusions:

I. In Healthy Subjects.—1. Vapor of water is continually being exhaled through the skin.

2. During the course of the day, the quantity of vapor of water evaporated varies at different times; it decreases from the early morning till midday, and then rises from that time until evening.

3. These regular variations are independent of the use of solid or fluid food, as well as of the bodily temperature, so long as it remains within normal bounds.

4. The ingestion of food and drink has no influence on the exhalation of vapor of water through the skin.

5. The production of vapor of water rises with increased, and falls with decreased, temperature.

6. The different parts of the body contribute unequally to the amount of perspiration: the arm furnishes, relatively, much more perspiration than the leg.

7. The perspiratory functions are more energetic in males than in females.

II. Perspiration in Nephritic Subjects.—1. Subjects of nephritic disease continually lose considerable quantities of water through the skin.

2. There is no regularity in the quantity of perspiration exhaled.

3. If the parts of the body are œdematous, more water is exhaled than when œdema does not exist.

4. In cases of acute nephritis, and perhaps also in nephritis with shrunken kidneys, but little water is exhaled.

5. In nephritis and in cases of enlarged kidneys, the behavior of the sweat-glands is different. In a case in which there was œdema of the extremities and face, urine small and containing albumen, the perspiration was less than in a healthy person. In a case of diabetes also the amount of water exhaled from the whole arm in an hour only amounted to grm. 0.031, an enormous decrease.

Janssen has been able to find no difference between the varieties of nephritis as to the amount of carbonic acid exhaled from the skin, nor between œdematous and non-œdematous parts in this respect.—*Deuts. Arch. f. klin. Med.*, Bd. xxxiii., Hft. iii. and iv.

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SATURDAY, SEPTEMBER 15, 1883.

THE ORIGIN OF SPECIFIC DISEASES.

IN a recent Address on Pathology, delivered before the British Medical Association, DR. CHARLES CREIGHTON tries to show how certain diseases now recognized as specific, and which he characterizes as autonomous, that is, having a certain existence of their own independent of the normal physiological processes of the living body, may have arisen by a process of evolution from successive gradual changes in these physiological processes. He appears to entirely ignore the germ theory, and, although he starts out with the proposition that disease is only a modification of a healthy state, he becomes confused and obscure as he goes on, and speaks of infections which can exist outside the human body in the sense of diseases, thus confounding the cause with the effect.

He supposes cancer to arise from disordered secretion; tubercle in cattle from disordered nutrition more especially in certain deposits of fat; smallpox to have been originally a non-contagious skin disease of the negro; and yellow fever to be a modification of typhus developed in the slave trade.

This last is an old theory, advocated by a French physician, M. Audouard, to explain the introduction of the disease at Barcelona in 1821, but which has never met with any general acceptance by medical men. Contagious fevers appear in fact to have been of very rare occurrence on the slave ships, the chief source of mortality having been dysentery. Dr. Creighton seems to think, however, that the cause of dysentery in the black is the cause of yellow fever in the white, but this is a mere supposition; and is negatived by the fact that the converse does not hold good, for in epidemics of yellow fever there is no corresponding epidemic of dysentery in the colored population. If the poison of yellow fever can be generated by overcrowding and filth among the blacks, it ought to occur every summer in some of our large cities; which is not the case. Dr. Creighton's speculation as to the origin of smallpox rests on even more slender foundations than the yellow fever theory. The truth is, that all such speculations which ignore the effects of micro-organisms are very much like the celebrated Lyceum debate on the relative priority of the chicken and the egg. Fifty years ago it might have been permissible to write an elaborate treatise to prove that the phenomena of trichinosis were due to the use of beer, and the process of evolution acting on the Germanic race, but such is no longer the case.

We can understand the possibility of the production of disease in man by parasitic organisms; we can also readily conceive that by the process of evolution either the powers of these organisms may be changed, or the tissues of the human body may be rendered more or less susceptible to their effects, but we have no evidence in favor of the spontaneous generation of such organisms.

It is a good rule in investigating contagious and epidemic diseases to determine first the influence which known and existing circumstances have on their rise and development, and to make use of unproved and unprovable hypotheses only in regard to the unexplainable residuum.

If, for example, we wish to compare the theory that smallpox is due to a parasitic organism, which either has, or at all events originally had, a separate and independent existence, with the theory that smallpox is due to the grafting of particles of living matter from one living body to another, the first question which arises with regard to the latter supposition is, how long can particles of living matter, not independent organisms, retain their vitality when separated from the human body. This is a question which is a legitimate subject for experiment, but so far as we now know such survival of vitality is limited to a few hours. It has been determined, however, that the particles which have the power of producing smallpox or scarlet fever retain that power for weeks and months. By what law of evolution is it conceivable that this power of retention of vitality should be developed in connective-tissue cells?

It appears to us much wiser to investigate the causes of disease, organic and inorganic, which are now acting on man, than to speculate about possible causes of several thousand years ago. Such a statement as that "a mere condition or state of the ruminant body can be abstracted, as it were, from all other ruminant conditions, and made to live in another body," is very illy calculated to stimulate inquiry as compared with Koch's definite statements of the presence of a peculiar form of bacillus in bovine tuberculosis. Sydenham's definition of a specific disease as "one that takes its rise in a specific exaltation or specification of some juice of the body," which Dr. Creighton says expresses his meaning, reads to us much like the celebrated explanation that the narcotic effects of opium are due to a certain sleep-making power which it possesses.

We do not wish to be understood as advocating the germ theory or the graft theory of the causation of specific diseases, but only as urging that these theories are much more worthy of consideration than that of specific conditions or states of the body, for the reason that they are susceptible of investigation by experimental methods, while the latter is not.

THE PICRIC ACID AND OTHER TESTS FOR ALBUMEN.

The profession is much indebted to Dr. George Johnson for recalling attention to picric acid as a delicate test for albumen in urine. Attention was first called to it about ten years ago, when it was recommended that into a saturated solution in a test-tube the suspected urine be allowed to fall, drop at a time. Should albumen be present in sufficient quantity, a distinct cloud is observed to follow each drop of urine as it descends through the picric solution.

As thus applied, the picric acid is not a delicate test for albumen. Nor is it when simply mixed with urine; but in the following modified form it is by far the most delicate and convenient test we have handled. Dr. Johnson recommends that a saturated solution, made with boiling water, be allowed to flow gently from a pipette upon some of the suspected urine in an inclined test-tube, just as in the nitric acid test the acid is overlaid by the urine. The order is here reversed, because the picric acid solution is lighter than most urines. If there is the least albumen present, a delicate but sharply distinct white line appears at the border between the two fluids. Even more care is required in carrying out this process than with the nitric acid test, since the two solutions approach each other more nearly in specific gravity, and, therefore, diffuse more readily. At the same time, the white line remains a longer time, because the precipitated albumen is not dissolved so quickly by the picric acid as it is by the nitric.

We have for some time been in the habit of testing each specimen of urine we have been called upon to examine, by heat, by nitric acid, by the acidulated brine suggested by Dr. Roberts—made by adding an ounce of hydrochloric acid to a pint of water, saturating with common salt and filtering —and by the picric acid solution. As the result of these experiments, we have found that quantities of albumen, so small as to escape detection by the nitric acid and acidulated brine, can be detected by heat and subsequent acidulation—particularly after setting aside for a few hours, when the doubt as to a diminished transparency is often settled by the presence of a delicate sediment, not soluble by heat. But we have further learned that a quantity of albumen which would escape detection by the latter method can be demonstrated without doubt by overlaying the urine by the picric acid solution.

As to the relative value of the nitric acid and the acidulated brine, we believe the latter is a trifle more delicate, partly because the color-line, which always forms at the junction of the acid and urine, is never so marked when the brine is used. And when we consider that the salt solution is very much more satisfactory to work with because of its comparatively non-caustic properties, it is greatly to be preferred, and should be always used instead of the pure acid.

We have heretofore continued to use the nitric acid, as well as the boiling with subsequent acidulation, although the latter is far more delicate than the former for small quantities of albumen, because it is well known that sometimes, when *comparatively large amounts* of albumen are present, it fails to be thrown down by heat; or only a trace appears, the remainder, often a considerable amount, remaining in solution. And although this acid-albumen may be made to show itself by working to and fro with larger quantities of acid and reapplying heat, yet it never fails to appear by underlaying with nitric acid, and, of course, with the acidulated brine, so that the two methods are a check upon each other. We shall never forget the look of dismay upon the face of a poor woman who had been in the habit of testing the urine of her daughter, and who had detected but a trace of albumen for some weeks, and sometimes none at all, when upon our adding a little more nitric acid, and again boiling some of the same specimen which she had herself tested, down came a copious precipitate of albumen.

This source of error, so far as we know, is also avoided by the picric acid test, so that, for large or small quantities of albumen, it becomes the most delicate test easily available. Lest it should be thought that the precipitate represents some other form of albumen than the serum albumen found in deranged renal circulation, we would state that not only have we found numerous specimens of urine in which there was no response whatever to picric acid, but in every instance in which the reaction occurred, the urine was from cases where, on account of irritation of the genito-urinary passages. it was reasonable that albumen should be present; so that we are in hearty accord with Dr. Johnson that it is a delicate test for serum-albumen only. In the way of objection to the picric-acid test this alone can be said: When working with urines of low specific gravity, it is difficult to overlay them with the solution of picric acid, because of such low specific gravity, in consequence of which the two fluids diffuse very rapidly. And again, to some the vivid yellow stain which it imparts to the hands may be an objection.

Other test solutions for albumen to which attention has recently been drawn are (1) saturated solution of ferrocyanide of potassium with free acidulation by citric acid, suggested by Dr. Pavy; (2) solution of potassio-mercuric iodide after acidulation with acetic acid (Tauret), or by citric acid (Stephen); (3) acidified solution of potassio-mercuric iodocyanide, and (4) acidulated solution of sodium tungstate. The last two were suggested by Dr. George Oliver in the *Lancet,* February 3, 1883. The solution of ferrocyanide of potassium is less delicate than the picric acid, but the potassio-mercuric iodide is equally sensitive. The acidulated solution of potassio-mercuric iodocyanide is also delicate, but troublesome to prepare. In a limited experience, we have not found the sodium tungstate solution suggested by Dr. Oliver, as delicate. It is made by mixing equal parts of a saturated solution of the tungstate salt, saturated solution of citric acid, and water; and as thus prepared it is colorless and of a higher specific gravity than most urines. The potassio-mercuric iodide may be preferred by some on account of its absence of color, but the picric acid will always recommend itself by reason of its easy preparation and simplicity, no special preparation, and no acidulation by other acid being required. We are in the habit of preparing and keeping a solution in an ordinary test-tube.

One most important precaution must be observed in testing for small quantities of albumen, by whatever reagent—*always work with a transparent urine.* If a turbidity cannot be filtered out in the ordinary way, add solution of potash, and warm before filtering.

With these more modern additions to our qualitative tests for albumen, it would seem that in this department of urinary chemistry all has been attained that can be desired.

LITHOLAPAXY.

It is not a little surprising that Bigelow's American operation has found its chief practical welcome abroad, as shown by the *résumé* of 590 operations, given in a paper by Desnos, in a late number of the *Rèvue de Chirurgie.* Of the 46 operators quoted, Guyon leads with 226 operations, and Sir Henry Thompson follows with 101, together counting more than fifty-five per cent. of the total number. Only nine other operators have done it in ten or more cases. Of these, Bigelow himself has done the most (forty-five), and Van Buren and Keyes follow with thirty-three. Scarcely a single American case is quoted outside of Boston and New York. Yet its success has been so remarkable, even from the single standpoint of the mortality, to say nothing of rapidity and comfort of the cures, that it ought to be at present the operation *par excellence.* Yet the surgeons of the Middle, Southern, and Western States seem for the most part to have ignored it. Guyon has obtained cures in 94.7 per cent., as against 91.8 by ordinary lithotrity, in spite of the fact that he has treated stones of even five and one-half centimetres (two and one-eighth inches) in diameter. The duration of treatment he has brought down from forty-seven days in lithotrity to seventeen days in litholapaxy, while the occurrence of fever and other accidents has variously diminished from four to thirtyfold. In Sir Henry Thompson's and Van Buren and Keyes' hands, the recoveries were ninety-seven per cent., and in Bigelow's, about ninety-six per cent. Of the whole number, six per cent. died, as against about eleven per cent. by ordinary lithotrity.

Desnos gives a history of the steps by which this "complete revolution," as he well terms it, has been attained. Beginning with Heurteloup in 1829, Cornay in 1843 (who devised an aspirator with an air-pump), Crampton, and Amussat, each added somewhat, the latter, in 1853, even proposing the crushing of the stone at a single sitting. But under the shadow of the great names of Nélaton and Thompson, lithotrity for twenty years was limited to short and frequent sittings, leaving a large number of sharp, angular fragments, sure to do mischief to an already inflamed and sensitive bladder.

Meantime, under the lead of Otis, investigation had developed the fact that the normal urethra was larger than had been believed, and resting largely upon this fact, Bigelow devised most happily his new operation, an operation which he and others have modified and improved in detail, but the principle of which remains intact—a laurel well deserved. Once that instruments of large calibre could be introduced into the bladder, a stone, broken into numerous small fragments, or better still, as Desnos insists, almost into sand, could be sucked out at a single sitting, and the bladder relieved at once. One other step was needed, and that Bigelow boldly tried and proved it feasible—anæsthesia. This rendered possible a prolonged sitting, with repeated crushings and aspirations. There is now no possible doubt that a prolonged sitting and repeated mechanical operations, which get rid of the stone at once, are less dangerous to the bladder than frequent short sittings, which leave numerous fragments. Indeed, it is even possible that we have gone too far in prolonging these operations to two or three hours, or even longer, and that a fragment or two may be left for removal at a later sitting rather than prolong the operation to such an extent as to injure the patient either by the prolonged anæsthesia or by too long-continued manipulation. Guyon's sittings averaged only twenty-three and a half minutes, and hardly ever lasted an hour. The same may also be said of the size of the evacuator. While the largest possible instrument is theoretically the best, those of somewhat smaller size present a facility of introduction and safety in manipulation that recommend them greatly; even a No. 16 of the French scale has served an excellent purpose. Especially is this true if the crushing be effectually done first.

The operation is as yet in its infancy; but it is a lusty infant. Improvements, mechanical and manipulative, are constant. We are learning its limits and its capacities. It will be a shame if it should find its home in Europe rather than in America, and receive its improvements more from foreigners than its countrymen. Sir Henry Thompson gave it a rather frigid reception at first, but, as his figures show, he is now its warm friend, and his name alone is a tower of strength. We bespeak for the method a more general trial. How many Philadelphia surgeons have tried it? How many west of the Alleghanies? How many south of the Ohio?

TRAINED NURSES.

Until birth, sickness, and death pass away nurses will remain a necessity. The fact being so, the quality of the nurses to be had is no longer a matter of indifference, but of profound interest to the sick, and of almost equal importance to the well; for these last have deeply at heart the recovery of their dearest ones, and it is but a question of time when they themselves will be numbered among the sufferers.

The credit of first establishing training schools for nurses has generally been given to Pastor Theodore Fliedner, of Kaiserswerth on the Rhine, in 1836, or to Miss Florence Nightingale, as a result of her experience during the Crimean War in 1854. But the fact is, that the Philadelphia Lying-in Charity began its efforts in this good cause as early as 1828, under the late Dr. Warrington, and subsequently under Dr. Ellwood Wilson, who also gave there in 1856 the first public gynecological clinic.

And now comes another plea from this city for more and better trained nurses. The Nestor of the American profession in another column makes an urgent and timely appeal for more widely diffused opportunities for such training. Our chief cities, Philadelphia, New York, Boston, Washington, New Haven, Chicago, San Francisco, etc., have all well-established schools for this purpose, but Prof. Gross, with his large-hearted sympathies, makes a strong plea for the towns and villages of the *country*.

Sickness knows no latitude. It has no geographical limitations. It is not metropolitan in its manifestations. Farmers and laborers suffer from it as much as the inhabitants of our cities. Indeed, in view of the far larger number of the rural population and their lessened facilities for obtaining nurses, and the infrequent visits of their doctor, often miles away from their homes, country-folk need good nurses far more even than city-folk.

The knowledge nurses need does not "come by nature." The "knack" for nursing is more or less an inborn quality, but "knack" plus training is quadrupled power. Some such plan as is so admirably sketched by Dr. Gross is entirely feasible, and if realized would supply in many a country town and neighborhood a pressing want and save many a life.

Moreover, we are glad to see another point in Dr. Gross' scheme—a point that should be thought over in our cities especially—that such instruction be given to *men* as well as women. As to men, it is a fact that there are no "trained" male nurses in the same technical sense as we speak of trained female nurses. A few good male nurses there are, trained in the school of experience—the same school that existed for women long before the Philadelphia Lying-in-Charity and the Kaiserswerth school were thought of. But that is not "training." There ought to be for male nurses the same opportunities that exist for women.

We trust, in the contemplated training school at the Philadelphia Hospital, that adequate provision will be made for giving men equally full and complete instruction.

In conclusion we urge two points: First, let the press, medical and secular, as is requested by the distinguished author, call wide attention to the subject and so arouse the interest, both of the profession and the public, to an urgent need. Secondly, let us hear speedily that the plan has been actually tried in some enterprising rural neighborhood. Let us hear of the methods adopted, the modifications found necessary, and the results obtained.

NOISE NUISANCE.

To the sick and convalescent, and to "nervous people"—a class rapidly increasing in number with the progress of our civilization—street noise is an intolerable nuisance which, in some cases, may result in positive injury, and is a penalty paid for living in the city. Many of these noises are, in a degree, the necessary concomitants of traffic and manufacture, and are, therefore, the results of useful occupation; others are inheritances from by-gone days, and have long since survived the period of their utility. Of the latter we may mention, as conspicuous examples, the church bell and the factory whistle, both of which have been entirely superseded in their useful purpose ever since the introduction of watches into universal use.

In Great Britain the factory whistle has been controlled and ameliorated by Act of Parliament, and in this country the church bell is likely to be regulated by the courts. Indeed, the Supreme Court of Pennsylvania, in 1877, declared that the noise produced by the ringing of the chime of bells in a certain church in Philadelphia to be a nuisance to be abated, and it enjoined their ringing, except for certain services on Sunday, when it is permitted for five minutes preceding these services. In New York the ringing of the bell of St. George's Church has caused considerable annoyance to the residents in the neighborhood of Stuyvesant Park, who have recently brought the matter to the attention of the Board of Health, and, if necessary for its abatement, we are informed, will carry it to the courts, which, following the tendency of all recent decisions both in this country and in England concerning such nuisances, will, doubtless, grant equitable relief.

SOCIETY PROCEEDINGS.

MEDICAL SOCIETY OF VIRGINIA.

Fourteenth Annual Meeting, held at Rockbridge Alum Springs, September 4, 5, 6, and 7, 1883.

(Specially reported for THE MEDICAL NEWS.)

SEPTEMBER 4TH, FIRST DAY.

EVENING SESSION.

THE Fourteenth Annual Session of the Medical Society of Virginia, convened at Rockbridge Alum Springs, Va., at 8.30 P.M. This renowned health and summer pleasure resort was selected as the place for the present meeting, in acceptance of an invitation from Col. Frederick Effinger, the President of the Springs Company. The attendance was about one hundred physicians from this State, besides some distinguished gentlemen from other States, prominent among the visitors being Drs. L. McLane Tiffany, Dean of the University of Maryland, and John N. McKenzie, of Baltimore, and Julian J. Chisolm, of Baltimore.

A band of music enlivened the occasion of the assembling, and many ladies, besides hosts of the male guests of the Springs' Hotel favored the Society by their attendance.

DR. WM. D. COOPER, of Morrisville, Va., PRESIDENT of the Society, occupied the Chair.

After prayer by Rev. Dr. J. J. Lafferty, the next order of business was announced to be the

ANNUAL ADDRESS TO THE PUBLIC AND PROFESSION,

by DR. J. E. CHANCELLOR, of the University of Virginia. After stating that, by the request of the manager of the Springs, and as a former resident physician on these grounds, he welcomed the Society and urged the members to enjoy the pleasures which might be found here. Dr. Chancellor then announced as the subject of his address,

MINERAL WATERS.

He reviewed the history of mineral water from the earliest times down to the present, and then after defining what a mineral water is, he proceeded with an exhaustive discourse upon the formation of such waters; their chemistry and composition, the geological character of the soil which produces them, where they are likely to be found, and their classification, and their importance as medicinal agents, closing his address by a comparison between natural and artificial mineral waters, and demonstrating the fact that the latter can never equal or take the place of the former. The address was warmly received by both the public and profession, and is an important contribution to the literature of the subject.

After some formal business, the Society adjourned.

WEDNESDAY, SEPTEMBER 5TH, SECOND DAY.

MORNING SESSION.

After the meeting had been called to order at 10 A.M., and the minutes of yesterday were read and approved, DR. G. WM. POLLARD, of Aylett's, Va., Acting Chairman of the Committee on Applicants for Fellowship, presented his report. Some thirty-eight or forty new members joined during the session.

THE PRESIDENT next appointed thirteen Fellows, representing different sections of the State, a committee to *nominate officers* for the ensuing term.

At the hour of 11 A.M., the special order of business being the

PRESIDENT'S ADDRESS,

DR. WM. D. COOPER proceeded to deliver it—after inviting Vice-President, Dr. Meade C. Kemper, of Goshen, Va., to assume the chair for the time. His subject was the *Individual Rights of Physicians, and the Limited Protection afforded them by our State Laws, with Suggestions as to Some Action of Redress.* It was an excellent address, clearly defining the rights of doctors to claim special legislation to enable them to perfect themselves in scientific studies, so as to be more servicable to the people, while at the same time they may protect themselves against the encroachment of quackery, charlatanry, etc. The power of thorough organization and determined effort were well pointed out.

The next order of business was the report on advances in different departments of medicine.

REPORT ON ADVANCES IN ANATOMY AND PHYSIOLOGY.

DR. JOHN R. WHEAT, of Richmond, Va., Reporter. This paper showed careful study of the subject in hand.

REPORT ON ADVANCES IN CHEMISTRY, PHARMACY, MATERIA MEDICA, AND THERAPEUTICS.

Honorary Fellow and ex-President DR. A. M. FAUNTLEROY, of Staunton, Va., Reporter. Chemistry, since Sertürner, over fifty years ago, announced the discovery of morphia, has played an important *rôle* in medical progress. In the last few years, *actinium* has been separated in the metallic state. *Liquefaction of ozone* has been accomplished by compressing ozone in oxygen, and the indigo-blue drops have been preserved for nearly thirty minutes. The probable existence of active allotropic nitrogen was referred to. Ammonia from the atmosphere may be obtained by deoxidizing the air by coal dust, in the presence of watery vapor, at red heat. Common salt is put in the furnace with the coal; liberated chlorine combines with the nascent ammonia, forming ammonium chloride. Artificial indigo, by synthesis from a benzine nucleus, is an industrial chemical triumph, for colorless propiolic acid, when treated with a reducing agent, yields indigo blue.

Apomorphia, the reporter has repeatedly witnessed as an abortive of epileptic seizures, and as a calmative in cases of acute mania. This suggestion is valuable, since it comes from a reporter who has had years of experience with brain and nervous disorders, as former medical superintendent of the largest insane asylum in the State. He recommends it to be used hypodermically. The conversion of morphia into codeine, by chemical processes, was referred to, and the phenyl character of morphine, he thought, seemed established. Under the heading of constitution of atropine and its derivative products, tropic acid, tropine, and homatropine, were mentioned, and the mydriatic effects of the latter agent referred to. Hyoscine was spoken of therapeutically as a surer agent than atropia. It is also valuable in whooping-cough, asthma, and epilepsy. The alkaloids of cinchona, and its derivative products, were next considered. Chinoline salicylate and tartrate were mentioned chemically, and the synthesis of thymol and resorcin were the last reference made to the chemical department of the subject.

Glucose as an excipient of pill masses was specially commended, as well as nitre tablets for asthma and insomnia. Solution of morphia in boiling water for hypodermic use, was the next topic. Compressed disks for hypodermic use were mentioned. Colorless tincture of iodine was referred to cosmetically. Several agents were referred to as deodorizers of iodoform, none of which was so highly commended as Tonka bean. The use of chloral hydrate as a vesicant —long ago suggested—is now put forth as an established success. The chloral is sprinkled on adhesive plaster, and applied to the flesh while warm. In about ten minutes the part is free from pain, but blistered as effectually as if by fly-blister.

Jamaica dogwood blunts pain and promotes sleep, and was recommended as particularly valuable where opium cannot be used. Dr. Fauntleroy has given it successfully in facial neuralgia. It is best given with milk. Rhamnus purshiana, Cascara sagrada, as a tonic aperient for infantile indigestions, etc., were referred to. Convallaria maialis as a cardiac stimulant, and its therapeutical application as the rational outcome of its physiological action, were referred to. It is considered perfectly safe.

REPORT ON ADVANCES IN OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

DR. M. G. ELLZEY, of Washington, D. C., Reporter, stated that he had assigned the report on Diseases of Children to Dr. Wm. H. Coggeshall, of Richmond, reserving the other two branches of his subject for himself.

Obstetrics.—He said that the advanced state of the science of obstetrics precludes the expectation of brilliant and revolutionary advances. There are perhaps no advances more important than the general observance of the principles of the Listerian surgery in obstetric practice, and the general recognition of the scientific validity of the so-called germ theory of disease. Among the menacing perils of child-birth, eclampsia, post-partum hemorrhage, and placenta prævia still stand forth formidably prominent. The possibility of the production of embolus by styptics—especially preparations of iron thrown into the uterine cavity — was referred to. The abuse of forceps was strongly condemned. No man has a right to terminate a natural labor by force, and whosoever uses forceps to gain time for himself is guilty of a criminal assault.

Diseases of Women.—The recent activity of gynecologists has been so great that it seems hard to select particular advances as worthy of the particular attention of the general practitioner. The reporter strongly condemned the abuse of pessaries, and the making of vaginal explorations of married and unmarried females upon trivial grounds, and protested against the growth of pretended specialism in practice, as in many cases a mere bold system of advertising quackery; condemning also promiscuous resort of women of all ages and ranks to hospitals and specialists for every real or fancied ailment, for the diagnosis and treatment of which every reputable practitioner is, or ought to be, perfectly competent. The reporter dwelt earnestly upon the deplorable results of the abuses which, it is much to be feared, are gradually becoming to be tolerated in medical circles, in the general treatment of uterine disorders.

DR. WM. H. COGGESHALL, of Richmond, Va., read the report on

ADVANCES IN DISEASES OF CHILDREN,

in the course of which he made special mention of congenital phimosis, and its treatment. He made protest against the indiscriminate performance of circumcision in cases where true stenosis is absent, as in many such instances the condition may be relieved by the employment of a little dexterity on the part of the surgeon. He also advised against the too common employment of chloroform in convulsions, and referred to the favorable mention by later writers of nitrite of amyl inhalations for the relief of this affection. Reference was made to the remarkably successful results obtained last year by Dr. Macguire, of New York, in the treatment of cancrum oris by subnitrate of bismuth. He gave the treatment of the commoner forms of children's diseases as employed in the New York hospitals for children, closing with a strong recommendation of the fluid extract of ergot for employment as a systemic treatment in pertussis, from his personal experience.

After the reports had been read, DR. GABRIEL MCDONALD, of Union, W. Va., expressed the opinion that Dr. Ellzey had given a too narrow range to the use of the forceps. In natural labor, Dr. McDonald maintains, when everything is all right as to dilatability of os and position of head, relative sizes of mother's parts, etc., and the pains are effecting no good, he applies the forceps. He thinks it cruel to let the mother suffer so long when she can be relieved by the instruments.

DR. HUME FIELD, of San Marino, Va., asked if he gave chloroform?

DR. MCDONALD replied that he first applied the forceps, then chloroformed, and then delivered.

AFTERNOON SESSION.

The afternoon session was entirely devoted to the election of

OFFICERS FOR THE ENSUING YEAR,

which resulted as follows:

President.—J. Edgar Chancellor, M.D., of Charlottesville.

Vice-Presidents.—Drs. S. B. Morrison, of Brownsburg; P. K. Graybill, of Amsterdam; Bradford Brown, of Alexandria; Samuel K. Jackson, of Norfolk; J. M. Estill, of Tazewell C. H., and Thos. J. Pretlow, of Jerusalem.

Recording Secretary.—Dr. Robert G. Cabell, Jr., ot Richmond.

Corresponding Secretary.—Dr. Hugh M. Taylor, of Richmond.

Treasurer.—Dr. Richard T. Styll, of Richmond.

Executive Committee.—Drs. W. W. Parker, of Richmond, Chairman, and Honorary Fellows, Harvey Black, F. D. Cunningham, J. Herbert Claiborne, and Samuel C. Gleaves.

Committee on Nominations.—Drs. Geo. Wm. Pollard, of Aylett's; Lewis Wheat, J. Philip Slaughter, Wm. D. Hooper, and Hugh T. Nelson.

Committee on Publications: Drs. E. T. Robinson, C. W. P. Brock, and George Ross, all of Richmond.

Evening Session.

Dr. Thos. J. Riddell, of Richmond, Va., moved that the Committee on Publications be instructed to have the forthcoming volume of *Transactions* published separately from any medical journal.

Dr. L. B. Edwards, in seconding the motion, took occasion to speak commendably of the *Atlantic Journal of Medicine*, edited by two members of this Society. Carried.

Under the call for scientific papers, etc., Dr. Thos. H. Howard, of Floyd C. H., exhibited a vial containing

ELEVEN HUNDRED FRAGMENTS OF BONES WHICH HE HAD REMOVED FROM THE EAR

of a woman aged 46 years. She had dreamed some years before that when eleven hundred pieces were removed, she would pass no more fragments. He thought it probable that they were the result of a fracture of the external plate of the skull. He stated that the time occupied in removing the fragments was four years.

The general sentiment of members of the Society who examined the fragments was that many of them were not bones belonging to the human race, and that it was a case of deception by a hysterical patient.

Dr. M. G. Ellzey, of Washington, D.C., presented a volunteer paper on the

THERAPEUTIC VALUE OF THE RAWLEY SPRINGS, VA.

He stated that the Rawley water is an alkaline chalybeate, the iron existing as carbonate of the protoxide, held in perfect solution by excess of carbonic acid, with which the water is supersaturated as it escapes at the fountain. No other water containing iron in this form is known elsewhere in America; but the Rawley water is nearly identical with the celebrated waters of Spa, Schwalbach, and Tunbridge Wells. An analysis of the water by Prof. J. W. Mallet was given, and from the analysis the therapeutic uses of the water may be deduced. The springs are delightfully situated in the midst of the North Mountains, near Harrisonburg, in Rockingham County, Va. The summer climate of the Appalachian hills of Virginia is nowhere surpassed in the entire world. Rawley water is a prompt and most efficient diuretic, closely resembling in the character of its alkaline ingredients the celebrated Buffalo lithia water. From its supersaturation with carbonic acid, it acts like champagne in quieting the vomitings of hysteria, pregnancy, and chronic debauch, and for anæmia and impoverishment of the blood, from whatever cause, in all ages and both sexes, it surpasses in efficacy every preparation of the apothecary.

Dr. L. B. Edwards moved to refer all papers thus far read to the Committee on Publication. Carried.

Adjourned.

Thursday, September 6th, Third Day.

Morning Session.

After the routine work of registering, reading minutes of the preceding day, etc., invitations to places in which to hold the next annual session were presented.

On motion of Dr. W. W. Parker, Rawley Springs, Va., was selected as the

PLACE OF THE NEXT ANNUAL MEETING,

in acceptance of the invitation from the Springs Company, who promise to make no hotel charge to doctors and fraternal delegates who may visit the session.

THE TREASURER'S REPORT.

The Treasurer, Dr. L. B. Edwards, presented his report, which showed a balance of $39 to the Society's credit, and without any outstanding indebtedness. Upon his motion, an auditing committee was appointed by the President, to examine into his accounts and report as early as practicable.

THE REPORT OF THE RECORDING SECRETARY.

Dr. Edwards, as the retiring Recording Secretary, also presented a report, showing that with all the resignations, deaths, members dropped from register, etc., the total membership this year had increased to over 450.

Under calls for papers from fraternal delegates, Dr. Julian J. Chisolm, of Baltimore, fraternal delegate from the Medico-Chirurgical Faculty of Maryland, read one on

HOW TO REMOVE FOREIGN BODIES FROM THE EAR.

He alluded to a common error of belief among the laity, that the ear opens directly into the brain. He mentioned a large number of the foreign bodies that may enter the ear cavity, and described the form of the cavity itself. After suggesting that the physician should always examine for himself to see that a foreign body is really in the ear, and to discover its nature, he referred to the method of examining the cavity by means of a speculum, a reflecting mirror, and a good light, etc., he cautioned against mistaking certain natural conformations for foreign bodies. He then remarked that, usually speaking, certain foreign bodies may remain indefinitely in the ear without injury, and in many cases without inconvenience. To remove an insect, necessarily an air-breathing animal, he recommended to drop in the ear some bland olive oil, which speedily destroys its life, and to follow this up by the use of the ear-syringe with warm water, and the foreign body will soon be washed out. He cautioned against the use of forceps by the inexperienced physician. The true object of his paper was to urge upon physicians the use of the ear-syringe, and a stream of warm water as the all sufficient means for removing foreign bodies from the auditory meatus. "I have never seen a case of foreign body in the ear, not tampered with by others, that I have failed to extract by the syringe." It is in the *persistent* use of this simple and innocent means that the object is finally attained. The syringe should hold from one to two ounces, and be easily worked by one hand. If the foreign body be vegetable in kind, use alcohol instead of water, as alcohol has the power of shrinking vegetable matter swollen by moisture. First, cleanse the ear of all purulent secretions, then fill the aural passage with alcohol, inserting a plug of cotton at the external meatus to prevent its escape. It can do no harm to let it remain there all night. After the soft seed in the ear has been shrunken by soaking in alcohol, its removal by the stream of water will be much expedited. When the necessity arises for the removal of a foreign body, and when these means fail of success, it is safer to send the patient to a specialist who is at least apt to be more dextrous in the use of ear instruments than the general practitioner.

Dr. J. St. Pierre Gibson, of Staunton, Va., exhibited

SUSPENSORY-EXTENSION SPLINTS

for fractures of the upper and lower extremities, illustrating their application by "putting up" a man who acted as a patient. The name of the splints indicates the principles upon which they act.

PLASTIC SURGERY OF THE FACE.

Dr. L. McLane Tiffany, a delegate from the Medical and Chirurgical Faculty of Maryland, presented a paper on this subject. He made no attempt to treat the subject exhaustively, but considered the general principles only. The subject was divided into three heads: 1st. Measures for the restoration of parts congenitally at fault, either by excess or deficiency. 2d. Measures for the restoration of parts deficient in consequence of accident or disease. 3d. Measures for the correction of deformity due to cicatricial contraction, a class usually associated with the preceding. The first class differed from the others in several respects, principally because the edges of the deficiency were healthy, and because similar deformities being often seen, opportunity was afforded for perfecting operative measures. The latter two classes comprised cases in which much scar-tissue was an essential element, and differed greatly the one from the other in locality and shape, similar lesions being very rarely seen. The anatomical composition of the face was alluded to, attention being directed to the great mobility of the features.

To remedy a deficiency comprised,

1. Obtaining a piece of tissue to fill the vacancy and preparing its bed.
2. Putting it in position and nourishing it.
3. Filling the vacancy resulting from transfer.
4. Ultimate result as regards usefulness and appearance. Skin similar to lost skin should be always sought for; scar-tissue was to be rigorously excluded, and a flap taken much larger than the space to be filled. Primary union was to be attempted; this failing, union by granulation was to be sought for. Incisions should follow natural furrows, and be out of sight when possible. The flap was to have a broad pedicle without twisting if possible. Packard's suggestion of cutting skin obliquely was referred to favorably. Hemorrhage was to be arrested by hot water and pressure. Granulating surfaces were to be dressed with iodoform and cotton. Quill suture is to be used, passed very deeply, and edges lightly held together by fine wire. Operations should be preceded by an injection of morphia under the skin. Preparatory treatment is generally required.

In operations about the mouth (inside), the patient should lie supine, the face towards a window, horizontal, and the thorax projecting beyond the table supported by assistants at each shoulder, so as to allow the blood to flow from the mouth and not towards the larynx.

DEFLECTION OF THE NASAL SEPTUM AND ITS TREATMENT.

Dr. John N. Mackenzie, a delegate from the Medico-Chirurgical Faculty of Maryland, of Baltimore, after some preliminary remarks on nasal obstruction, and the unsatisfactory manner in which the subject of deflection of the septum had been heretofore treated, proceeded to comment on the frequency of the deformity, the dependence of the form of the external nose upon corresponding peculiarities in the septum, and the influence of national custom in the production of asymmetrical conditions of the cartilage. Deflection is most frequently observed in youth and manhood, is more common in males, and occurs as the result of the changes in the skeleton of the face that accompany the processes of old age. Attention was called to an inherited proclivity to deflection. The deflection may be congenital or acquired; in the latter case it may result from traumatism, or occur as the sequel of a pathological process. He laid special stress upon asymmetrical conditions of the nasal fossæ as a cause of septal deflection, and the possibility of the occurrence of the accident during difficult parturition. The frequent introduction of the finger into the nose, and the cleansing of the organ with the hand were next commented on. Tumors of the nasal and accessory cavities, hypertrophied states of the turbinated bodies, etc., diathetic diseases (rickets, syphilis, osteomalacia, etc.) were also given as causes of deflection, and as a matter of historical interest, the theories of Quelmalzius were referred to. Dr. Mackenzie then gave a detailed and minute account of the anatomical part of his subject, and a description of the different varieties of the malformation based upon his anatomical and clinical observation. He insisted upon the influence of the deformity in the production of throat and middle-ear disease, and indicated the pathological processes which follow as the natural results of the deflection. In connection with this part of the subject, he called attention *to the production of throat and aural disease through the reflex agency of the vaso-motor and trophic nerves*, the primary irritation originating in the turbinated tissues of the nose, and probably from the reflex sensitive area which he had shown to exist in these organs. Passing from diagnosis to treatment, the rational management of the case will vary with the nature and situation of the deflection. The operations with the galvano-cautery, knife, snare, resection, Adams' operation and its modification, the procedure of Blandin, the removal of portions of the septum with the revolving burr of the dental engine and the metacarpal saw, and the suggestion of Dr. Delavan to remove the middle turbinated bone of the *unobstructed nostril* were commented upon, and their relative merits discussed. The operation generally known as "Steele's," viz., triangular division of the cartilage, Dr. Mackenzie showed to have been performed by Dr. Jas. Bolton, of Richmond, eleven years before the appearance of Steele's article. He thought, therefore, that the operation should be known as "Bolton's," and Steele's procedure as a modification of the Bolton operation. To retain the septum in position after operation, Dr. Mackenzie suggested *the use of rubber bags* introduced into the nostrils and inflated, as less liable than other forms of plugs to produce irritation, and as a means of securing uniform pressure. These bags can be mounted on a central canula, after the manner of the well-known rubber tampon for epistaxis. In certain cases of deflection of the bony septum, he recommended as a substitute for operation on the septum itself, *removal of the turbinated bone of the obstructed nostril*, and related a case where he had successfully performed the operation.

A vote of thanks was given to each of the three visiting delegates for their instructive papers, copies of which were requested for publication.

Dr. Joseph A. White, of Richmond, Va., exhibited some *Instruments for Use in Deflected Nasal Septum;* also a specimen of a *Foreign Body Removed from a Patient's Nose.*

The Auditing Committee reported that the

ACCOUNTS OF THE TREASURER

were correct, and upon their motion $25 were voted to reimburse, in part, Dr. Edwards for advances he has made for the Society's interests.

After the installation of the newly elected officers, Dr. Samuel K. Jackson, of Norfolk, Va., read his

REPORT ON PRACTICE.

After alluding to the reproach "That there is so little certainty in the practice of medicine as to allow the proverbial differences of opinion between practitioners," he announced as the subject of his paper, "The advances that have been made towards securing a true scientific basis."

Though Prof. Huxley has dated the rise of medicine back through some eighty generations, scientific medicine can hardly be traced further back than the discovery of oxygen. This is the true era, which occurred but a little while before the career of the oldest among us. So that it has all been built up in our very life-time. Before that but few of the functions of the animal economy could be understood. Physiology could make but little progress until the development of the fundamental science of chemistry.

The new theory of evolution has done much by informing us how our growth and development has been affected by our surroundings, and the young science of biology has conferred a great benefit by showing how diseases are occasioned by organisms which prey upon living beings, as well as the conditions favoring the attacks of these predatory parasites, and also the necessity, as well as the means, of destroying them. It also has shown us how nature attempts to preserve the health and life of both animals and plants by excreting the products of parasitic life, and also by providing ingredients poisonous to the parasites. In this way plants furnish us with some of our most valuable germicides, and a careful and extended study of them may furnish us with other, and, may be, still more valuable and destructive means than any we now possess. Though quinine is the most valuable antidote we yet know of, for the malarial poison, that it is the only one or the most efficacious one to be found in nature, is preposterous, or that it is the only germicide equally powerful in all zymotic diseases is unphilosophical in the extreme.

We have reached the point now where it has become necessary to study the minute differences between germicides to ascertain precisely which are most efficacious in the various diseases of parasitic origin. Thus by the germ-theory of disease, the whole treatment of zymotic diseases has been revolutionized.

Before these recent discoveries we unconsciously made use of some germicides without knowing how they proved efficacious. Mercury had long been used for the destruction of epizoæ, but when we administered it internally, it was never supposed that it was for the purpose of destroying entozoæ. We can *now* understand its power in the suppurative processes. The use of this valuable agent was one of those stumblings on the truth, of which we have many examples. In selecting our germicides we are furnished with a key by Mr. Law, which, as far as is known, he was the first to enunciate on this floor, viz., that "no organism can live in its own excreta, that the products of its life-processes become poisonous to it, stop its ravages and destroy its life." If this be true, we have only to saturate it with its own exhalations. We know how efficacious this is when carbonic acid is the exhalation; when it is alcohol; when it is ammonia, as in typhoid fever; when it is sulphuretted hydrogen, as in some cases of indigestion. The examples might be multiplied indefinitely.

He announced it as his belief that it is only as a germicide, an antidote, that we use quinine, without any reference to its therapeutical or physiological powers; that these, about which there is such difference of opinion, are ignored and disregarded, and we use it in any condition of the system in spite of them.

The time devoted to the zymotic phase of the subject prevented an extended notice of the treatment of diseases due to a chemical fault, the results of which are as certain as chemical reactions themselves. He considered that a great advance had been made by Koch's discovery of the bacillus tuberculosis, notwithstanding the efforts of Dr. H. F. Formad, of the University of Pennsylvania, to disparage them. We have many formations analogous to the tubercle among animals as well as among plants of undoubted parasitic origin, which renders it highly probable that this abnormal formation is due to a like cause.

We already begin to see results from these advances, in the interest manifested in sanitary science, in State medicine, in the establishment of health boards, in the stamping out of epidemics, or in depriving them of their virulence, in the lessening of disease, and, finally, in diminishing death-rate.

Though some striking figures could be furnished from private practice to substantiate these assertions, for fear of a misinterpretation of motive they will not be produced, but only those furnished by the army and navy will be made use of for this purpose.

In the army the numbers on the sick-list diminished from 18.63 to the thousand of mean strength in the year 1871, to 15.13 in the year 1881 (white troops). In the whole army, both white and colored, from 18.04 in the year 1871, to 15.36 in the year 1881.

The number of deaths from disease, per thousand cases treated, declined from 6.78 in 1871, and 7.22 in 1872, to 4.32 in 1881, being as low as 3.75 and 3.97 (colored) in 1877.

The number of deaths per thousand of mean strength declined from 12.13 in 1871 to 6.64 in 1881, about one-half. Though the navy reports do not show such a decline in the number of cases treated, they show equally as favorable results in the cases actually treated.

In the year	1875	there were	627	cases treated	to 1000	men
"	1876	"	561	"	"	"
"	1877	"	687	"	"	"
"	1878	"	702	"	"	"
"	1879	no report				
"	1880	there were	990.87	"	"	"

In the year	1875	there were	3.84	deaths	to 1000	men
"	1876	"	2.51	"	"	"
"	1877	"	2.35	"	"	"
"	1878	"	4.61	"	"	"
"	1880	"	2.94	"	"	"

Deaths to the one thousand cases treated declined from 6.11 in 1875, to 2.74 in 1880.

The city of Norfolk furnishes further proof of the value of medical practice, by the diminution of the death-rate after the restoration of an appropriation for medicines for the poor, which had been withdrawn for three years, which, as a consequence, were three years of very heavy mortality. During those three years the work of the irregular practitioners was very much increased, as they supplied their own medicines. Their losses were enormous, notably in cholera infantum and diphtheria.

We conclude, then, that we are not spending our energies on the baseless fabric of a vision, that we are not imposing upon the public a myth, the product of a distempered brain, but that the noble art to which we are devoting our time, our talents, and our energies, is the outcome of a sound philosophy built upon sciences, the principles of which have been evolved by the highest modern cultivated intellects.

Afternoon Session.

Dr. Wm. D. Cooper, of Morrisville, Va., the retiring president, was duly elected an

HONORARY FELLOW OF THE SOCIETY.

Dr. Wm. C. Dabney, of Charlottesville, Va., read a paper entitled

THE PRESENT ASPECT OF THE BACILLUS TUBERCULOSIS QUESTION.

He reminded his hearers that bacilli have been found in many other places than in tuberculous cavities. His conclusions may be summarized as follows:

1. The bacilli observed by Koch in the sputa and

tissues of tubercular patients, and considered by him the essential cause of tuberculosis, are not peculiar to this disease, but are found in a number of other diseased conditions, and even in some of the discharges of healthy persons.

2. It is probable that they make their appearance in the caseous masses subsequent to their formation, these masses furnishing a suitable soil for their growth and multiplication.

3. Experiments made with "indifferent substances," and the still stronger evidence furnished by the experience at the Brompton Hospital, render it highly probable that the bacilli are not the primary and essential cause of the disease.

4. The inoculation-experiments of Koch are not conclusive, because they were made chiefly on animals in which any irritant is liable to set up a caseous inflammation, the caseous matter thus formed furnishing a suitable nidus for the development and growth of bacilli, and being capable of producing tuberculosis by inoculation (whether owing to the presence of bacilli or not is unknown as yet).

5. It is probable that the presence of the bacilli in the lungs, or rather, diseased organs, may hasten the advance of the morbid process.

DR. CHAS. M. SHIELDS, of Richmond, then presented his report on the

ADVANCES IN OPHTHALMOLOGY, OTOLOGY, AND LARYNGOLOGY,

of which the following is an abstract.

The relation of diseases of the general system to some forms of eye trouble was first considered, mention being made of the several forms of choroidal trouble due to uterine disease; of malarial hemeralopia, and the effects of pernicious anæmia on the retina. In the progress of the physiology and anatomy of the eye, the amount of albumen in the aqueous was stated to be .03; and attention called to the discovery by Giacomini of cartilage in the semilunar folds of the negro, and its absence in the white race. In connection with the subject of *sympathetic ophthalmia*, he alluded to the investigations of Krause, who found that in eyes in which neurotomy had been performed, the cornea again became sensitive, and the ciliary nerves reunited; from which he drew the conclusion that unless patients could be kept under occasional observation, enucleation should be performed instead of neurotomy, when circumstances called for one or the other.

Trituration of the cortex of the lens, to hasten the development of cataract, was found successful by Förster, of Europe, and Mettendorf and others of this country, it being performed by kneading the lens by pressure on the cornea with a cataract-spoon after an iridectomy, and while the anterior chamber was empty. The recently suggested use of eserine in iritis was favorably commented on, *i. e.*, to employ it to reduce the vascularity of the iris, while mydriasis was still kept up with atropine. He favored its use, too, in episcleritis. The method of M. Badal of stretching the external nasal nerve in the treatment of glaucoma was mentioned, as was eserine also, but the advice was given of keeping the patient under observation after the use of either, and to resort to iridectomy at first if the patient could not be occasionally seen. Eserine has proved useful in hemeralopia, peripheral ulceration of the cornea, and hydrophthalmus. The use of the *electro-magnet* in removing foreign bodies from the vitreous and lens was referred to, and the employment of galvano-puncture in detachment of the retina. *Jequirity* has been found useful in granular lids, in the form of an infusion; 32 of the powdered seeds are added to 1000 grammes of water. The infusion, when painted on the lids, produces a mild form of purulent ophthalmia. On the healing of this, the granulations are usually found to be cured. He exhibited some samples of this agent. *Hydrobromate of homatropine* was advised for dilating the pupil for ophthalmoscopic purposes, its effects lasting for a shorter time than any of the other mydriatics. Nitrite of amyl in quinine amaurosis, boracic acid in granular lids, and iodoform in croupous conjunctivitis were mentioned.

Taking up *Otology and Laryngology* he referred favorably to the use of sulphide of calcium in otitis externa and furuncles of the meatus, also in mastoid disease. A *résumé* of an interesting report by Dr. E. Weil, of Stuttgardt, showed a much larger percentage of school-children affected with ear disease than was generally supposed to be the case. Speaking of the methods of removing foreign bodies from the ear, he said that over eighty per cent. could be removed with the syringe, and if swollen, the addition of alcohol would cause them to contract. If the syringe fails, then the blunt hook or forceps are to be used under good illumination. A case of transient poisoning from the instillation of a solution of atropine in a healthy ear for ear-ache was reported. The "dry method" of treating otorrhœa was considered and mention was made of the use of the finger in the diagnosis of post-nasal disease. In post-nasal and nasal catarrh he advocated the use of insufflations of nitrate of silver and calcined magnesia, as suggested by Schalle; the proportions 1 to 15, 1 to 10, and 1 to 6 being the most useful. Most cases of catarrh are benefited by using purified lamb's wool in the nostrils to prevent cold air, dust, etc., from coming in contact with the diseased surfaces. In hypertrophic nasal catarrh, he considered nearly all treatment unavailing, unless the thickened tissue is removed with Jarvis' snare or the galvano-cautery.

(*To be concluded.*)

CANADA MEDICAL ASSOCIATION.

Sixteenth Annual Meeting, held at Kingston, Ontario, September 5, 6, and 7, 1883.

(Specially reported for THE MEDICAL NEWS.)

KINGSTON, the old capital of Canada, offers certain advantages for the meeting of a medical association. Though a town of only sixteen thousand inhabitants, the profession comprises men of considerable energy and ability. For thirty years it has been the seat of a medical school—the Royal College of Physicians and Surgeons—which is in affiliation with Queen's University. There are two hospitals: the general, a Protestant, and the Hôtel Dieu, a Catholic institution. The Provincial penitentiary is situated here, and has about six hundred inmates, and there is a large asylum for the insane, with five hundred patients. Queen's University, the Presbyterian college of Canada, is a well-endowed institution, with about two hundred students. The Military College of Canada is also here. Situated at the east end of Lake Ontario, close to the Thousand Islands, the city is unusually well placed for excursions, etc.

SEPTEMBER 5TH, FIRST DAY.—MORNING SESSION.

GENERAL MEETING.

The meeting was called to order by the PRESIDENT, DR. JOHN MULLIN, of Hamilton, Ont., and the Association was warmly welcomed by the Mayor on behalf of the citizens, and by Dr. Sullivan on behalf of the profession.

Dr. Hunt, of the Asylum for the Insane at Pontiac, Mich., Prof. McLean, of Ann Arbor, Mich., Dr. Walker, of Detroit, delegate from the American Medical Association, and Dr. Dorland, of Milwaukee, delegate from the Wisconsin State Medical Society, were invited to the platform.

After the reading of minutes and election of members, the reports of committees were then taken up.

Dr. Canniff, of Toronto, as Chairman of the

SPECIAL COMMITTEE ON VITAL STATISTICS,

reported that the committee had never held any meeting, and that he had been frustrated in his efforts to secure a grant from the Dominion Government for the collection of vital statistics. He read letters showing that this had been caused by Dr. Larocque, Dr. Playter, and others calling a convention at Ottawa and forming a separate society, for which they succeeded in getting a grant from the Government.

Drs. Playter and **Larocque** explained their connection with the convention referred to, and showed that the matter was entirely an oversight. They were under the impression that the special committee of which Dr. Canniff was president had ceased to exist after last year's meeting.

Dr. Larocque, of Montreal, read a most exhaustive report from the

COMMITTEE ON CLIMATOLOGY AND PUBLIC HEALTH,

which was received.

Dr. Oldright noted two or three points which he thought should be discussed. The first of these was the subject of local boards of health. He thought the efforts of the Association should be used to have these established in all parts of the Dominion by the various Provincial governments. Other important subjects were the reporting of contagious diseases to the authorities and the licensing of plumbers. He thought, also, that the removal of sanitary legislation from the Provincial to the Federal government, as recommended by the report, would be a mistake. There was sufficient work for both. The Dominion government should attend to such subjects as adulteration of food, immigration, and commerce and manufactures.

Dr. Yeomans remarked that a systematic report of contagious diseases was furnished to all the schools of Hamilton, by means of which the mortality among the school-children had been reduced and the attendance at the schools increased.

A vote of thanks was tendered to Dr. Larocque for his able report.

Drs. Botsford, G. E. Fenwick, Grant, Graham, Rogers, Bray, Worthington, Malloch, Gliver, Eye, Sweetland, Canniff, Oldwright, and the President were appointed a

SPECIAL COMMITTEE ON NOMINATIONS.

Dr. Metcalf extended an invitation to the membeers to make a

VISIT TO THE ASYLUM

at their convenience, after which the meeting adjourned to meet at 2 P. M.

Afternoon Session.

The afternoon session opened at 2.30, and the first business was

THE PRESIDENT'S ADDRESS,

in which **Dr. Mullin** briefly returned thanks for the honor which had been conferred upon him, and then referred to the presence of both old and young physicians. They were both welcome, especially the former, whose attendance showed that their eyes were not dim, nor their natural forces abated. A brief allusion was made to the death of Dr. David, of Montreal, late Secretary of the Association. It had been remarked that the itinerancy of the Association had been opposed to its usefulness and jeopardized its existence, yet every meeting gave increased confidence in its success. All who attended its sessions recognized the advantages derived from every place where it had met. Each had given its special contribution to the success of the Association, and in each place it had elicited the cordial support of the profession. We look for continued success when we reflect on the standing of the profession in this vicinity, and remember that we have come to an important centre of education and culture. Every member of this Association gladly recognizes that the institutions of this city remain worthy of the history of Eastern Ontario, and exercise their influence over the youth of the present with increased vigor, corresponding to the growth of our country. He said that the importance of the annual meeting could not be over-estimated. Each of the medical societies had its spheres of usefulness; the country, city, and provincial associations could do work that would advance the interest and knowledge of the members of the profession, but the highest and best results may be attained by the Association gathering to it each year the members of the profession from all parts of the Dominion, who in the discussions would reflect the progress they were able to make. All cordially agreed with the remarks made by the president of the Ontario Medical Association at its late meeting, who referred to the relationship of the various local societies to the Dominion Association, and indicated that while each worked in its own sphere, all should coöperate and endeavor to promote the work of the Dominion Association. The speaker said he would not attempt even a slight sketch of the work of the past year, but would confine himself to one subject—the agencies through which the decomposition of organic substance was effected. As practitioners of medicine all must recognize that while chemical affinities might and do play their part, the decompositions referred to were attended with and seemed to be dependent upon the growth and development of vegetable forms. He referred to the several experiments that had been made in support of this theory. He concluded by saying: "Our knowledge at present is in accordance with that long since found true, that as regards contagious fevers and tubercular diseases our efforts must depend to a great extent on our success in teaching the public to rely less upon antidotes and more upon those means which tend to build up strong frames capable of withstanding the agencies causing disease; that our main hope of lessening the mortality from these diseases lies in the carrying out by the public of proper sanitary measures, and, as regards the individual, attention to the laws of health."

Medical Section.

Dr. Graham, of Toronto, in the chair.

DIET AS A THERAPEUTIC AGENT.

Dr. Playter, of Toronto, urged the necessity and importance of proper diet in acute and chronic maladies, and spoke of the ailments induced by the habitual consumption of an excess of food.

In the remarks which followed, **Dr. Reeve**, of Toronto, stated that he believed that many cases of phlyctenular ophthalmia in children were caused by over-eating of fresh fruit. He had known instances in which fruit had been given in considerable amount to sucklings.

Dr. Graham referred to the important influence of food in skin affections; many acute attacks depend upon peculiar sorts of food, while many chronic maladies may be produced by either a defective or excessive diet.

INVAGINATED AND GANGRENOUS BOWEL.

DR. SHEARD, of Toronto, presented the specimen, and read notes of the case. The specimen showed eight or nine inches of the ileum invaginated in the colon and gangrenous. The patient, a man, aged thirty-seven, had a right inguinal hernia, which became strangulated, and was reduced, but without the cessation of the prominent symptoms. A tumor appeared in the right iliac region, and Dr. Burns opened the abdomen, when the condition above described was discovered. The hernia was omental, and apparently had had nothing to do with the intussusception. The man died shortly after the operation.

INFLATION OF THE LUNGS BY ABDOMINAL AND THORACIC TRACTION.

DR. BOTSFORD, of St. Johns, N. B., described the method which he believed might be of some service in cases of suspended breathing in drowning, during anæsthesia, or in new-born children. By means of pieces of plaster, four by four inches, fitted with rubber rings, and applied on the abdomen or lower thorax, traction could be made in such a way as to draw down the diaphragm. The doctor had not had an opportunity of trying his method, but he thought the suggestion might be of some value.

DR. BURNHAM, of Toronto, late House Surgeon at the Royal London Ophthalmic Hospital, stated that in that institution they had had no deaths from anæsthetics for six or seven years, though, of course, among the very large number anæsthetized every year many cases occurred in which methods of resuscitation had to be employed. In a case of danger one assistant straddled the patient and exerted pressure on the abdomen, while a second performed artificial respiration with the arms. Inhalation of amyl nitrite was employed, and believed to be of the greatest value.

SUCCESSIVE DROPSIES OF THE AMNION, ALWAYS SPECIFIC.

DR. DORLAND, of Milwaukee, Wis., presented the report of six cases in which, in successive pregnancies, the amount of liquor amnii was in great excess, and in all evidence of syphilis could be obtained. In several of the cases specific treatment seemed to be successful in preventing the condition, which had occurred in previous pregnancies. The cases were given in detail, and the doctor had had the patients under observation for some years, all of them having occurred in family practice.

In the discussion which followed, Dr. Mullin narrated a case in which, with a syphilitic child, the amount of liquor amnii was very large. Dr. Yeomans and others mentioned instances in which there was no suspicion of syphilis.

MEDICAL ETHICS.

DR. DUPIUS, of Kingston, read a paper on the *Relation of Medical Men to Each Other, and to Each Others Patients*, which was largely a plea for free trade in medicine.

Dr. Harrison, of Selkirk, Dr. Canniff, of Toronto, and Drs. McCannon and Oliver, of Kingston, repudiated warmly the opinions expressed by Dr. Dupius, and there appeared to be a very general feeling that a mistake had been made in permitting such a communication to come before the Society.

HYOSCYAMINE IN THE TREATMENT OF MENTAL DISEASES.

The results of six years' experience with the drug were given by DR. METCALF, of the Kingston Asylum. Of the two preparations of Merck, the crystalline was preferred. The dose given was from one-twelfth to one-eighth of a grain, hypodermically. Two great advantages were promptitude and certainty. In sixty patients treated in all forms, no ill-effects had followed, and very many were benefited. One full dose was usually given daily; if after a few doses no benefit followed, the use of the drug was discontinued. In some forms recovery appeared to follow; six cases of severe mania were all benefited, and it seemed advantageous in all forms of maniacal excitement.

DR. HURD, of Pontiac, Mich., had little to add to Dr. Metcalf's experience. The drug appeared to change the mental action. Intoxication may be produced. He had found particular benefit in cases of melancholia with persistent refusal of food. It appeared to change the delusion on which the refusal depends. In these cases he gave small doses of one-twenty-fourth to one-forty-eighth of a grain. In one patient choreiform movements appeared, ceased with the interruption of the medicine, and reappeared when again administered. It seemed to increase the appetite, and the patients often awoke hungry. It should never be given in large doses where there is any fatty degeneration of the heart.

DR. DANIEL CLARKE, of the Toronto Asylum, thought that the drug should be more widely used by general practitioners in cases of delirium tremens, acute mania, and melancholia with suicidal tendency. He used Merck's preparation, and also the tincture (B. P.), not in the ordinary doses, but as much as one and a half ounces. He had found the greatest benefit in sthenic mania, and if it is to do good, two or three doses will suffice.

DR. THORBURN, of Toronto, suggested caution in the use of such doses of the tincture as recommended by Dr. Clarke. He had a lively remembrance of the introduction by Jones, of Jersey, of large doses of digitalis in delirium tremens. He gave two instances in which a fatal result had apparently been caused by large doses of this medicine.

DR. TROUTMAN, of New York, had had much experience, and placed great reliance on the drug. It is contra-indicated in acute delirium with dryness of tongue and muscular tremors. It is also injurious in general paresis with much excitement.

LEPROSY IN NEW BRUNSWICK.

DR. GRAHAM, of Toronto, read an exhaustive paper based on a study of the leper settlement at Tracadie, N. B. The region in which the disease appears has about two thousand inhabitants, chiefly French-Canadians, who live on small farms, and also engage in fishing and hunting. The diet is mainly fish, potatoes, and bread, with but little meat. They are partial to stale fish, preferring it to fresh. Large families live in small rooms. He had made a thorough investigation into the family history of the various sufferers, and presented interesting genealogical charts. At present there are only twenty-four patients in the Lazaretto, and the average length of residence is five years. A few cases are at large, and it is chiefly through the influence of the priests that they are detected and secluded. Dr. Graham's conclusions are as follows:

1. Although it has been shown in other countries that the disease can be propagated purely by hereditary influences, no case has yet been recorded in Tracadie, so far as he could learn, which would prove that theory.

2. That the disease was imported from without, and, finding favorable surroundings, it spread from one to another by contagion. In order to contract the disease, certain conditions appear necessary: (*a*) low state of the system. It has been noticed in Tracadie that persons die from very slight ailments and that there is very little power of resisting disease. (*b*) To belong to certain race or family. The Le Bretons

among the Tracadie families entirely escaped. (*c*) Lengthened and intimate contact with leprous persons with frequent opportunities for inoculation.

Surgical Section.

Dr. Tye, of Chatham, Ont., in the Chair.

IMPERFORATE ANUS WITH FECAL FISTULA.

Dr. Fenwick, of Montreal, narrated the case, which was that of a man admitted to the General Hospital with a remarkable malformation of the lower bowel. There was a small opening at the site of the anus, and another at the root of the penis, just in front of the scrotum. The orifice in the perineum was the result of an operation for imperforate anus shortly after birth. The canal in the perineum leading from the rectum appeared like a direct continuation of the bowel. The case was a very unusual one, and it was decided to close the perineal canal, which was done without much difficulty. Prof. McLean, Drs. Walker, Holmes, and Bethune took part in the discussion.

RETROVERSION AND RETROFLEXION OF THE UTERUS.

Dr. Worthington, of Clinton, read a paper on four interesting cases. A prolonged discussion followed on the best modes of treatment, Drs. Gardner, Holmes, Tye, Fulton, and Hingston taking part.

FEMORAL HERNIA.

Dr. Campbell, of Seaforth, Ont., read the notes of a case of femoral hernia in which he had operated successfully after three and a half days' duration of the symptoms.

PARACENTESIS PERICARDII.

Dr. McDonald, of Londonderry, N. B., reported a case in which over twenty ounces of pus were removed from the pericardium and recovery took place.

EXPERIMENTS ON RESECTION OF THE BOWEL.

Dr. James Bell, of the General Hospital, Montreal, gave the results of a series of experiments in which he had removed portions of the bowel in dogs, the length of the pieces ranging from a few inches to a foot and a half or two feet. In almost every instance the animal recovered perfectly, and when killed at a later period perfect union was found with no narrowing of the calibre of the gut. A series of specimens illustrating the experiments was shown, and the paper concluded with a description of cases which the writer had observed in which abdominal section and removal of portion of the bowel would have been justifiable.

Thursday, September 6th, Second Day.

Morning Session.

General Meeting, 10 a.m.

After the reading of the minutes, Dr. Fulton, of Toronto, read the

REPORT OF THE COMMITTEE ON NECROLOGY,

and gave a list of thirty-seven members of the profession who had died since the meeting in Toronto last year.

Dr. Thorburn, of Toronto, presented the

REPORT ON EDUCATION,

and referred more particularly to the establishment of schools of medicine for women in Toronto and Kingston. He congratulated the Province of New Brunswick on the steps which had been taken to advance the standard of education in that province by establishing a Medical Council and an Examining Board.

After the election of new members, the Association adjourned to the sections.

The President announced that those gentlemen interested in sanitary matters would meet and organize a

PUBLIC HEALTH SECTION,

in order to consider the best ways of furthering the establishment of the proposed sanitary association.

Medical Section.

Dr. Graham, in the chair.

PIGMENTARY DEGENERATION OF THE RETINA.

Dr. Tobin, of Halifax, N. S., gave an interesting case of four deaf-mutes in one family, all of whom presented characteristic symmetrical changes in the eyes in the form of scattered pigment masses on the retinæ, often in stellate forms. The parents were cousins. A full account of the disease was given, and the cases supported the views of Liebreich and De Wecker, who believe that a considerable proportion of them occur as the result of consanguineous marriages. A fifth case was also described.

Dr. Butler, of Montreal, had seen very many instances of the kind, and had never succeeded in tracing any connection between consanguinity and pigmentary degeneration; nor had he been more fortunate in trying to associate, as done by some writers, these cases with hereditary syphilis.

GENERAL HYDRARTHROSIS OF THE SMALLER JOINTS.

Dr. Fife Fowler, of Kingston, showed a child with enlargement of the smaller joints, wrists, ankles, and phalanges, due apparently to effusion. There had been enlargement of the spleen and the child had been out of sorts for many months.

DR. MORTIMER GRANVILLE'S PERCUTEUR.

Dr. Burnham, of Toronto, showed the instrument and explained its mechanism. He had brought it from London for a relative affected with persistent tic, which had resisted all modes of treatment, but had apparently been cured by the use of the percuteur. About one hundred and fifty percussions were made in the second. Dr. Granville had found it very beneficial in neuralgias and the lightning pains of tabes.

SOME POINTS IN CHRONIC BRIGHT'S DISEASE.

Dr. Osler, of Montreal, referred: 1. To the fact that so many cases of chronic Bright's disease were unsuspected, and the physician was first called to see the patient with one of the grave manifestations, cerebral or otherwise; cases were given in illustration. 2. To some peculiarities in the onset of the uræmic symptoms; two cases were given; one in which violent mania ushered in the uræmic attack in a man in whom no kidney trouble had previously been suspected, and a second, a woman in whom pronounced hysterical symptoms preceded an attack of uræmic coma. 3. To the occurrence of fatal uræmic symptoms at a very early stage of renal cirrhosis, while indeed, the coarse appearances of the kidneys were fairly normal. Two instances were given of sudden and fatal uræmic symptoms in men—apparently healthy— and the condition of the kidneys was such that they would have passed a superficial inspection, but on microscopical examination changes were found in the form of atrophy of some of the tufts and slight epithelial alterations.

Dr. Graham spoke of the great importance of the sphygmograph in the diagnosis of these cases, and referred a remarkable instance of chronic Bright's disease in which, with pronounced uræmic symptoms and finally death, the amount of urea was not reduced.

Surgical Section.

Dr. Tye, of Chatham, in the Chair.

Dr. Holmes, of Chatham, read an interesting paper on *Erosions of the Female Urethra*, which was discussed by Drs. Fulton and Sheard.

Dr. Hingston, of Montreal, showed to the Section a *note-book* which he had prepared *for ovarian and abdominal tumors*, and which he thought might be of some service.

Dr. Major, of Montreal, described the various *tumors* met with in *the naso-pharynx*, and the modes of removal. Several interesting specimens were shown.

Dr. Oldright read the notes of a case of *Fibro-myxoma of the Thigh*, and exhibited the specimen.

Dr. Poundfoot, of Montreal, read an article on *Color-Blindness*, and exhibited Thomson's instrument.

Public Health Section.

A meeting of the health officers and others interested in sanitary matters was held to discuss the proposed Sanitary Association. Dr. Sweetland, of Ottawa, was appointed Chairman, and Dr. Campbell, of Seaforth, Ont., Secretary.

Mr. Boxer, C.E., of Montreal, was invited to address the Section, and state what steps had been taken in the way of organization.

Dr. Oldwright moved, seconded by Dr. Robillard (Ottawa): "That in the opinion of this Section it is desirable that a Canadian Sanitary Association be formed for the purpose of assisting in the diffusion of information, and engaging in discussion regarding sanitary subjects, and to aid by its influence the various bodies which are or may be formed for introducing and carrying out sanitary measures among the people of the Dominion." Carried.

Mr. Boxer then presented the scheme which had been framed for the establishment of a Public Health Association for the Dominion, and after discussion the meeting adjourned.

The afternoon and evening were spent in an excursion among the Thousand Islands.

Friday, Sept. 7th, Third Day.

Morning Session—General Meeting.

After the reading of the minutes, on motion of the Secretary, the papers of Drs. Buller, Workman, Brouse, and Gardner were taken as read.

Dr. Saunders, of Kingston, called the attention of the members to a remarkable case of *Tumor of Bones of the Skull* in a child in one of the ante-rooms.

The Nominating Committe reported the following list of

OFFICERS FOR THE ENSUING YEAR:

President.—Dr. Sullivan, of Kingston, Ont.

Vice-Presidents.—*Ontario*, Dr. Thorburn, of Toronto; *Quebec*, Dr. Robillard, of Montreal; *New Brunswick*, Dr. Christie, of St. John; *Nova Scotia*, Dr. McDonald, of Londonderry; *Manitoba*, Dr. Lynch, of Winnipeg.

General Secretary.—Dr. Osler, of Montreal.

Treasurer.—Dr. Sheard, of Toronto.

Delegates were appointed to the American Medical and the American Public Health Associations.

Montreal was chosen as the *next place of meeting*, the date to be arranged by the President and Secretary in order to place it a few days before that of the British Association for the Advancement of Science, which meets in Montreal towards the end of August, 1884.

An invitation to meet in Winnipeg was received, but it was thought that in a year or two the means of communication would be better, and the members from the older Provinces could then get there with less inconvenience.

Dr. Bristol, of Napanee, and Dr. Thorburn, of Toronto, brought up the question of the *Standing of Militia Surgeons*, and moved a series of resolutions embodying changes which it was hoped the government would be able to effect.

The routine business was then transacted, after which the Association adjourned.

PHILADELPHIA ACADEMY OF SURGERY.

Stated Meeting, June 18, 1883.

The President, S. D. Gross, M.D., LL.D., D.C.L., in the Chair.

Dr. J. Ewing Mears presented a patient in whom

COLLES' FRACTURE OF THE RADIUS

had been very satisfactorily treated with the splint devised by Dr. Coover, of Harrisburg.

Mr. D., about six months ago, while walking along the street, near Broad and Chestnut, slipped on the ice, threw out his hand to protect himself, as is usual, and sustained a fracture of the radius just above the lower extremity. He told me he distinctly heard the bone snap. After the fall he rolled over on his back. A few minutes later he came to my office with a friend, and on examining the arm I found the usual well-marked symptoms of fracture at the lower extremity of the radius. The silver-forked deformity was very distinct. I also detected a luxation of inter-articular fibro-cartilage. Making extension and counter-extension with a good deal of force, I reduced the fracture, and thought that I had reduced the luxation of the cartilage, but I think that there is some evidence that it was not entirely reduced at that time. I then applied a temporary splint, and on the day following applied the splint which I now show, and which is, no doubt, familiar to the Fellows of the Academy.

I use this splint because it seems to especially fulfil the indications in fractures at this point. It is also very comfortable to the patient. In this it differs from the ordinary Bond splint, which is not a comfortable one. This splint is light, it is hollowed out for the reception of the ball of the hand, and it allows free movement of the fingers, which is important in these fractures.

On the second day I removed the splint and reapplied it. At the expiration of the first week, I began passive motion, guarding well the point of fracture. This was repeated twice a week during the entire progress of the treatment. I think to this is due, is great measure, the excellent movement which Mr. D. enjoys at this time.

The deformity is not very marked. He can flex and extend the hand freely and has also good lateral movement and pronation and supination.

Dr. Charles B. Nancrede exhibited a

FATTY TUMOR

which he had removed from beneath the aponeurosis of the occipito-frontalis muscle of a child, sixteen months old. The specimen is only interesting from the position in which it was found. It is nothing but a fatty tumor, but I question very much whether any of us have ever seen a fatty tumor in this position before. I know that there are at least two tumors that are said to have been removed from the same position, but whether they were under the aponeurosis or congenital, I cannot say. I removed this tumor, which was as large as a fist, this morning, from a child sixteen months old. It had been detected when the child was three months old, and therefore must have been congenital. It was then about the size of a bean, and rolled freely beneath the skin. When I saw it, it was just about the occipito-parietal portion of the skull. The bone was indented by it. From the fact that it was not a meningocele, that it was not a vascular growth, that it was congenital, that the skin moved freely over it, and that the exploring-needle showed that it contained no fluid, I thought it was fair to conclude that it was a dermoid tumor. I thought of fatty tumor, because it had been so diagnosed by Dr. Bennet, but I had never heard of a fatty tumor occupying this position. The operation showed it to be beneath the aponeurosis of the occipito-frontalis muscle, where no fatty tissue exists. A careful microscopical examination shows that it is a fatty tumor. I thought that possibly it might be myxomatous, but the microscope does not show it.

In the last edition of Gross's *Surgery* it is stated that Dr. S. W. Gross removed a tumor from this position. The patient was an adult, therefore I presume that it was not congenital and was not beneath the aponeurosis.

CORRESPONDENCE.

DISINFECTION.

To the Editor of The Medical News.

Sir: The "special article" on Cholera Disinfection, in your issue of September 1st, seems to me of sufficient importance and authority to justify me in pointing out certain errors which have crept into it. These errors are of a kind common enough in medicine, viz., statements, apparently probable by themselves, but not really based on definitely proven data. A disinfectant should not be recommended on theoretical grounds, but its application should depend on the results of actual and conclusive experiments to the point. We do not know as yet the nature of the cholera germ, however likely its existence appears. Hence, not knowing how difficult it is to destroy it, we should certainly make use only of those disinfectants which trial has shown to be the most destructive to micro-organisms. Otherwise we can but lull ourselves into a dangerous feeling of false security. This is equally true of disinfection in typhoid fever. For, while we yet lack absolute certainty as to the cause of this disease, we suspect, at least on just grounds, that the bacillus discovered by Eberth in the tissues represents the virus of typhoid fever. The bacillus is known to produce spores, and it is equally well known that in the state of spores micro-organisms offer by far the greatest resistance to antiseptic influences.

Of the disinfectants mentioned in the article, corrosive sublimate is decidedly the most reliable one according to all experiments. One part in five-thousand of fluid proves destructive at once to the most resistant spores. But, if substances are present which can unite chemically with the mercuric bichloride, and then convert it into mercuric combinations either insoluble or of less poisonous action upon bacteria, we require evidently a much larger proportion of the corrosive sublimate in the first place in order to get its disinfectant action. The alvine evacuations contain extractives, and in the case of rice-water discharges also mucus and albumen, so that a large proportion of the mercuric salt is practically wasted by entering into more or less inert combinations. How large a proportion of corrosive sublimate is required to get a disinfectant action upon the micro-organisms contained even in the healthy passages has never been determined by experiment. Perhaps the safest rule to go by for practical purposes, would be the directions given by Koch in the Report of the German Board of Health, who found that the presence of one part of *free ununited* corrosive sublimate in five-thousand parts of a solution is indicated by the amalgam formed on the surface of a polished piece of sheet copper in less than half an hour, which test fails when the mercury is in another state of chemical combination.

Quite different is the antiseptic power of chloride of zinc, so strongly recommended in the article. Koch found it harmless to spores in any concentration, while a one per cent. solution did not affect developed micrococci within sixteen hours' exposure. Bouvet sought a reason for its extensive surgical application in Germany in the fact that it renders an albuminous soil unfit for the development of bacteria, though it does not kill the latter. Sternberg required a two per cent. solution of chloride of zinc to destroy the micrococci of pus, though a half per cent. sufficed in the case of the septicæmia-micrococci. He does not mention any experiments with more resistant bacteria or spores. Hence, if the evacuations contain no spores, the proportion of chloride of zinc mentioned in the article might perhaps be barely sufficient for disinfection were not a part of it precipitated by uniting with organic substances, but if spores are present, which we must expect until the contrary is proven, this substance can be of no value whatever. Its power of arresting bacterial development while present in the mixture is of no account, for as soon as the evacuations are diluted with the contents of the cesspools or sewers, the percentage of chloride of zinc falls far below the proportion necessary to maintain this temporary antiseptic effect. The perfect disinfection of evacuations requires the absolute destruction of the contained germs before the material is thrown into the sewerage. On this account, carbolic acid cannot be trusted implicitly without an impracticable delay in time. For, while this agent destroys almost at once all developed micro-organisms, when present to the extent of two per cent., and probably even in a concentration of half to one per cent, it does not act upon spores in a five per cent. solution unless the exposure lasts longer than twenty-four hours. As regards the metallic sulphates, especially the iron copperas, I know of no investigations justifying their employment. On the other hand, Koch found them wholly inert with reference to spores, while Sternberg could not kill even the more vulnerable micrococci by an exposure of two hours to a sixteen per cent. solution of sulphate of iron.

The accurate experiments of Koch, Sternberg, and a few others, have shown that disinfection is not so easy a task as is usually supposed, even when we can immerse the material in the disinfectant fluid. Much more difficult even is aerial disinfection. Chlorine and bromine are certainly efficacious; but only when used in irrespirable quantities and with precautions requiring expert supervision. Sulphurous acid, on the other hand, has not proven reliable in the rigid tests made by Koch. In order to exert any effect at all, it must be present in such a proportion as to render it impossible to breath such air, and even under those conditions it did not penetrate well into the interior of thicker masses of material to be disinfected, while its effect on spores was very unsatisfactory. The employment of aerial disinfectants in an inefficient manner should certainly be discouraged, for the feeling of false security which it engenders, can but lead to the neglect of other precautions. The disinfection of the walls of rooms can be accomplished much more thoroughly by washing with antiseptic solutions, corrosive sublimate, chlorine and bromine water, or carbolic acid, when the wetting, moreover, of the dust adhering to the walls renders impossible the detachment of—living—particles by concussions or currents of air. For *wet* particles cannot be detached as readily as dry germs—if at all—from the surface to which they adhere, so as to become part of the floating matter in the air.

Lastly, allow me to supplement the "special article" by emphasizing the necessity of thorough ventilation, not alone with reference to its salutary effect upon the patient himself, but more so on account of the dilution of the aerial germs which it produces. Common medical experience, perhaps in typhus fever more than in any other disease, has shown that the danger of contagion increases in proportion as the air, breathed by the patient, is confined within walls. Though this may not apply in the case of diseases, the virus of which is confined to the more solid excreta, like cholera or typhoid, it is still best to insist at every fit occasion upon the utility, too much underrated by the profession and the laity, of thorough ventilation in the prophylaxis of contagious diseases.

H. GRADLE, M.D.

CHICAGO, September 1, 1883.

[The criticism of Dr. Gradle on our "Special Article" on disinfection, whether well founded or not, will serve to increase the interest, now too languid, on this important subject. He rightly states that only properly conducted experiments are of value; but he rashly assumes that our views were based on theoretical notions. Every agent referred to in the article in question has been the subject of numerous experiments. But Dr. Gradle appears to have no confidence in any observations not made on germs, and he seems doubtful of any experiments that do not have the stamp of Koch's laboratory. Admitting the existence of germs that are supposed to stand in a causative relation to certain diseases, must our disinfectants be limited to their destruction? Is not the fixation of organic matter, so that further changes, including the growth of minute organisms, cannot take place, a proper object of chemical disinfection? Dr. Gradle merely echoes the statements of our article when it is asserted that the most powerful aerial disinfectants are only effective, if at all, in an irrespirable quantity; but articles of a movable kind, unoccupied halls and rooms, can be saturated, so to speak, with chlorine and other gases. Dr. Gradle fears that the public will be lulled into a false security by the use of well-known and long-tried disinfectants that have not been shown to destroy spores—would he therefore discourage their employment? Until Koch follows the spores into the air, and discovers some gas which arrests their development whilst it does not harm the sick and their attendants, must we not utilize the agencies under our control? Will not the spores which resist chlorine, cease to grow when their pabulum is destroyed?—ED.]

THE ARREST OF HEMORRHAGE BY MEANS OF SURGICAL NEEDLES AND SILK LIGATURE.

To the Editor of THE MEDICAL NEWS.

SIR: The article of Dr. Allis in THE MEDICAL NEWS for September 1st on a special method for the arrest of hemorrhage during operations induces me to send for publication the details of the manner in which I have been controlling hemorrhage during operations for the last fifteen years. I have never seen Dr. Allis's forceps used, but I feel confident that they cannot be any more readily applied than the needles. With me it has for the last several years been a consideration to use as few instruments as possible. The various uses to which a single instrument can be put often enables a surgeon to dispense with quite a number of special ones, and if the experience of other country surgeons is similar to my own, one is saved the frequent vexatious annoyance of having the assistants hand the wrong instrument, which is almost certain to happen when one is most in a hurry, unless the assistants are extra well posted in the names of the legion of modern surgical appliances.

Before commencing an operation, if bleeding from small vessels is anticipated, I always thread a number of straight and curved needles with five or six inches of silk ligature, and lay them aside for use. As soon as hemorrhage becomes troublesome, an appropriate needle is selected, and being seized with a pair of Nicol's needle-holding forceps, the point is passed down and under the bleeding vessel, and brought out at a point opposite the point of entrance. The silk ligature is then passed by two or three figure-of-eight turns around both ends of the needle sufficiently tight to compress the bleeding vessel, and, at the last turn, the thread is pulled tightly under the end of the needle, and allowed to hang loose. When completing the dressing of the wound, the thread is unwound and needle withdrawn; if necessary, the artery can then be ligated or twisted. Respectfully yours,

H. OTIS HYATT, M.D.

KINGSTON, N C., September 6, 1883.

THE JOHNS HOPKINS UNIVERSITY.

To the Editor of THE MEDICAL NEWS:

SIR: From the number of editorial and other notes which have appeared in your valuable paper, it is evident that you take much interest in the future Johns Hopkins Medical School. But since that is not yet open, it may be interesting to look into what the other part of the University is doing for the advancement of medical education.

The faculty have recognized the fact that the collegiate education of one who intends studying medicine should be quite different from that of the future lawyer, classic scholar, divine or scientific specialist. They have therefore arranged a course of study, preliminary to medicine, which, being very practical, it would be well to glance at.

Chemistry and biology predominate. In chemistry, experimental lectures and recitations are given daily (for two years), on general chemistry (metals and nonmetals), organic chemistry and chemical philosophy. Besides, two years' work in the laboratory comprises a good course in the study of the elements, in chemical analysis (qualitative and quantitative), the preparation of various compounds, etc.

The course in biology consists of lectures on general biology (with laboratory work on typical individuals of plant and animal life), lectures and recitations on human and comparative osteology; lectures and laboratory work on the embryology of the chick, during the first year; and during the second year, lectures and laboratory work on physiology, histology, and mammalian anatomy.

The importance of these courses cannot be overrated.

Beside these there are one year courses in physics (experimental lectures, recitations, and laboratory work), in German, and in French; and elementary courses in history, English literature, and composition, and philosophy (ethics, logic, and psychology).

This plan is preëminently scientific, and it lays a good foundation in those sciences, which are at the basis of medicine. The great amount of laboratory work in different directions trains the student well in the *modus operandi*. How few are able to experiment "scientifically?"

Before closing let me add, that all who obtain the B.A. degree at the end of this course have at their matriculation, shown considerable familiarity with the classics and with mathematics.

It is very evident that this training prepares one excellently for the rational study of medicine.

Yours, H. F.

BALTIMORE, September 6, 1883.

NEWS ITEMS.

Yellow Fever at Pensacola.—During the past week there were thirteen deaths from yellow fever at the Pensacola Navy Yard. The latest telegrams now report all the cases as convalescing, and no new cases.

The cordon around the yard has been strictly maintained, and no cases have been reported outside of the naval reservation.

Yellow Fever at Havana.—There were eighteen deaths from yellow fever in Havana last week.

Cholera in Egypt.—The last reports from Alexandria state that numerous attacks of cholera still occur there, but that the average daily death-rate is reduced to four. The mortality in the provinces is stated also to be rapidly diminishing.

The total mortality from the beginning of the epidemic to the 15th of August is 21,524, and includes the residents of more than 200 towns and villages.

The responsibility for the unsanitary condition of Egypt is still unsettled. While Sir Edward Malet exonerates the Ministers from the charges of negligence brought against them on the ground of the utter incapacity of the Board of Health, the President of that Board and the Minister of the Interior are exchanging public congratulations on the zeal and success of their common efforts towards suppressing the cholera.

Dr. Schaffey Bey, who was despatched by the Egyptian Government to report on the origin of the cholera outbreak at Damietta, and whose opinion deserves thoughtful consideration, finds no history of importation from India, but he describes the existence in and about Damietta of precisely the same conditions which obtain in connection with the genesis of cholera in the Indian delta of the Ganges. Apart from local filth, he regards these conditions, however, as exceptional in the case of the Nile delta, and he describes how the special fouling of the water with the carcasses of animals which had died of bovine typhus, and how the orgies that prevailed during an eight days' fair which immediately preceded the outbreak, tended to favor the epidemic.

The French Cholera Commission has been most favorably received by the Egyptian authorities. M. Strauss, the chief of the commission, unhesitatingly pronounces the disease to be cholera.

The Commission has notified the French Government that the epidemic in Egypt is extinct.

M. Dumas, Perpetual Secretary of the Academies des Sciences, has received a telegram from M. Pasteur, under date of August 26th, stating that he had received that morning telegrams from the Cholera Commission in Egypt announcing some curious and novel observations.

Harvard Medical School.—The Medical Faculty of Harvard University will celebrate the centennial anniversary of the establishment of the school on October 17th. Dr. Oliver Wendell Holmes will deliver an oration, after which the new building recently erected for the college on Boylston Street will be dedicated.

The Ohio and Miami Medical Colleges.—Lectures were begun at these colleges, in the first week of September, according to the *Cincinnati Lancet and Clinic*, and the classes were from ten to fifteen per cent. larger than were ever before present at the opening of the session, and there are good prospects for a considerable increase over the large classes of former years.

Association for Diseases of the Respiratory Organs and Climatology.—A meeting for the purpose of organizing the national "Association for Diseases of the Respiratory Organs and Climatology" will be held in the parlors of the Academy of Medicine in New York on Tuesday, September 25th, at ten A.M.

Administration of Anæsthetics in Vienna.—The Vienna correspondent of the *Maryland Medical Journal* says that the administration of anæsthetics is conducted there in a way that "would make The Philadelphia Medical News turn purple with indignation. In some clinics pure chloroform is used, in others a mixture of chloroform three parts, ether one part, alcohol one part. The anæsthetic is poured upon a piece of flannel, which is stretched over a wire frame, which probably allows a sufficient admixture of atmospheric air, but no attention is paid to the position of the patient, the head and thorax being placed high or low according to the fancy of the operator, and it is no uncommon thing to see the administration being pushed with the patient in the upright position and vomiting. A few days ago I saw a boy suddenly become pale and pulseless, and it was only after the most vigorous artificial respiration, with galvanism, enveloping the legs with Esmarch's bandage, injections of ether, elevation of the lower limbs, forcible injection of cold water against the pericardium, and brisk flagellation that he was eventually restored to life."

Sir Spencer Wells.—It is announced that Sir Spencer Wells has been elected an Honorary Fellow of the Physico-Medical Society of Erlangen.

M. Verneuil will represent the Society of Surgery of Paris at the next International Medical Congress. M. Depres was invited to accept a commission, but he replied that he made it a rule never to attend "scientific fairs."

The French Cholera Commission.—M. Jules Aronssohn, Professor of Organic Chemistry at Paris, is charged with a scientific and medical mission in Egypt, where he will study cholera from an etiological point of view, while studying, at the same time, the physiological chemistry and therapeutical indications.

A Fatal Spider-bite.—Chancellor Carroll, of South Carolina, died on August 24th, at Cæsar's Head, from erysipelas following the bite of a spider. About a week before, this eminent jurist was walking in the woods about the famous mountain peak, and his face came in contact with a spider-web, which was suspended between two trees. The spider alighted on his chin, near the under lip, the Chancellor brushed it off with his hand, but was bitten by it in the mean time. He was attended in his illness by Dr. F. A. Miles, but after a week's suffering the distinguished jurist succumbed to the results of the spider-bite.

The Death of Louise Lateau, the stigmatica of Bois d'Haine, who attracted so much attention in medical circles a few years ago, is announced. This singular being was born on the 30th of January, 1850. She made her first communion at the age of 11 years, and began to earn her living as a seamstress at the age of 15. During the cholera visitation of 1866, she exhibited much devotion in attending to the wants of the pest-stricken. In 1867 she was attacked with a lingering malady, and received the last sacraments. She was, however, cured (miraculously, said her friends), but only for a short time. Early in 1868 she was said to have first experienced pain in the locality of the stigmata, and she again received the last sacraments. It is alleged, nevertheless, that she foretold her recovery, and on April 21st she appeared completely restored to health.

The first outward indication of the stigmata is said to have taken place on the 24th of April, 1868, when a wound in the side was visible, which healed the next day. On the 1st of May blood was reported to have issued from the upper surfaces of her feet as well as from her side, and she then confided the matter to M. le Curé. Seven days later the stigmata of the hands added themselves to the others, and M. le Curé advised her to apply to the physician of Fayt, who attempted to cure her. In the course of 1868 several evidences of ecstacy are said to have occurred, and on September 25, 1868, the crown of thorns first appeared. After this she ceased to sleep. Her alleged complete abstinence from all nourishment began on the 30th of March, 1871, and the wound on the shoulder appeared in the following April.

The case attracted great attention at the hands of medical men, physiologists, and psychologists, and numerous pamphlets appeared on the subject. Difficulties were interposed in the way of a thorough sifting of the case, but it was pronounced a gross imposture by many who had an opportunity of investigating it.

SALICYLIC ACID IN CANNED FRUITS AND VEGETABLES.—It being known that salicylic acid is used in foreign countries, to a considerable extent, as a preservative agent in articles of food, and that the quantity used frequently exceeds the amount allowed by law, MR. J. D. DENNY has recently examined twelve samples of different canned fruits, all of which were put up by American firms, in order to ascertain whether, and, if so, to what extent, that preservative is used in this country. After a thorough examination, he was unable to find any trace of salicylic acid.—*Physician and Surgeon*, Aug. 1883.

DROPPING THE TITLE OF HOMŒOPATHY.—The homœopaths do not seem zealous to adopt the suggestion of the advocates of the New York Code, that they should drop their distinctive title. *The New England Medical Gazette* (Homœopathic) says: "If, with success perched upon our banners, we trail them in the dust, if we surrender our home and deny our faith for the sake of membership in societies with which we cannot affiliate, and for consultations which we do not want, we shall indeed be traitors to our trust, and our names will rightly be 'a hissing and a byword to all coming generations.'"

RESECTION OF THE STOMACH.—This operation was performed on July 25th, by DR. F. SUPERNO, at the Pondidera Hospital. The operation lasted two hours and three-quarters. Twenty-four hours afterward the patient was in a good condition.

TREATMENT OF QUININE FALSIFIERS IN FRANCE.—HENRI CONSTANT LACOMBE has recently been tried before the Tribunal Correctioné, in Paris, for adulterating a large quantity of quinine which he had contracted to furnish to the Assistant Publique in monthly parcels. The parcels gradually became worse, and a box received in November, 1882, was found to contain a surface layer of quinine, the remainder consisting of a fraudulent mixture, and the box received later, while still intact and sealed with the contractor's seal, was similarly filled, about four-fifths of the contents being fraudulent. The accused pleaded that it was the result of an error on the part of his assistant that the quinine was adulterated.

The Tribunal gave judgment: "That the falsification having been committed in regard to an article which the accused knew was to be used for the diseases of patients entrusted to public charity, no extenuation could be admitted. Lacombe is, therefore, condemned to imprisonment for one year and to pay fifty francs penalty. And the court orders that this judgment shall be affixed to the number of twelve copies, one of which shall be attached during twenty-four hours to the door of Lacombe's warehouse, and that it shall be inserted in full, at Lacombe's expense, in twelve newspapers, and medical and pharmaceutical journals. Lacombe to pay the costs of the action."—*Quinologist*, September, 1883.

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending Sept. 1, 1883, indicate that typho-malarial fever and dysentery have increased, and that scarlet fever and remittent fever have decreased in area of prevalence.

Including reports by regular observers and by others, diphtheria was reported present during the week ending Sept. 1, and since, at seventeen places, scarlet fever at twelve places, and measles at five places.

OBITUARY RECORD.—The *Gazette Hebdomadaire* announces the death of DR. E. A. HOMOLLE, at the age of sixty-nine years. His name is connected with the discovery and therapeutic employment of digitaline, and he has long been known as an original worker in experimental therapeutics.

NOTES AND QUERIES.

BICARBONATE OF SODA IN ACUTE TONSILLITIS.

To the Editor of THE MEDICAL NEWS.

SIR: In your issue of August 25th, I noticed a communication from Dr. Vinke, of St. Charles, Mo., on the subject of Bicarbonate of Soda in Acute Tonsilitis. I have used this remedy myself during the past year, and desire to add my testimony as to its efficacy. In all cases of acute inflammation of the tonsils I have found relief to be prompt and lasting from a few applications of the soda. On first seeing the patient I apply the remedy myself, being careful to cover the entire surface of the inflamed glands with the medicine, which I do by any convenient method that I may have at hand. This is done in the presence of some member of the family, who is directed to make the application in like manner three times a day till recovery takes place A second visit is rarely necessary, nor are more than three applications usually required.

This remedy is simple; always at hand, and requires very little skill in its application, yet in a large majority of cases will be found exceedingly effective.

Respectfully yours,

JAMES ORR, M.D.

TERRELL, TEXAS, September 3, 1883.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM SEPTEMBER 3 TO SEPTEMBER 10, 1883.

SHUFELDT, ROBERT W., *Captain and Assistant Surgeon.*—Granted leave of absence for three months on surgeon's certificate of disability, with permission to leave the Department of the South.—*Par. 3, S. O. 204, A. G. O., September* 5, 1883.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

THE MEDICAL NEWS.

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ORIGINAL ARTICLES.

FEVER NOTES.

BY RICHARD McSHERRY, M.D.,
PROFESSOR OF PRINCIPLES AND PRACTICE OF MEDICINE, UNIVERSITY OF MARYLAND.

IT is not many years since there was a lively discussion in regard to the unity, duality, or plurality of some of the essential fevers, which, to most students of the present day, seems to be finally settled against the advocates of unity. *Conclusum est,* they would say, leaving no rational basis for argument. But granted that the dualists or pluralists have the right of it, there is often room in the mind of the practitioner for "obstinate questionings" as to what category the fever under treatment may properly come. Fever is undoubtedly more or less protean in shapes, and one form may merge into another, as, *e. g.*, to-day remittent, and to-morrow yellow; but it has common characters enough to entitle it to consideration independently of its varieties.

A great American authority of the last century says: "I shall not attempt to give a definition of fever. It appears in so many different forms that a just view of it can only be given in a minute detail of all its symptoms and states." (B. Rush.)

The American Medical Association attempts pretty successfully what Rush declines, thus: "Fever, *febris*, an acute affection of the system, with increased heat and derangement of all the functions."

Fever is then a very unquestionable entity, and the family likewise is so marked in its varieties as not unfrequently to cause difficulties in diagnosis or nomenclature:

"*Facies non omnibus una, nec diversa tamen qualem debet esse sororum,*" and, until science makes the living body quite transparent, some allowance may be made for the doctor's occasionally confounding congestive remittent with yellow fever, typhus with typhoid, or typhoid with acute tuberculosis. Any one may merge into the other.

Diseases will often deviate from the types so clearly laid down in the text-books; in fact, a real typical case agreeing throughout with its classical description is something of a rarity.

I saw but the other day some eight or ten cases of measles, where the eruption was not only measly, but purplish. The visitation was among boys picked up from the streets, poor, homeless little vagrants, who were taken to a house of charity, where they were to be taught useful trades, reading and writing and the catechism. The attending physician, Dr. Goldsmith, reported out of twenty-one cases taken ten deaths, and more in prospect. There was absolute adynamia, with rapid prostration, red and dry tongue, congested fauces, temperature, when exceeding 105° F., always indicating a fatal result, which occurred notwithstanding the liberal use of quinine and whiskey. Who ever sees such measles in ordinary practice?

I thought there was here a remarkable resemblance to typhus which I had seen some years previously in the same institution. Dr. John Morris, who saw these cases, remarked to me on the following day, that their whole condition and aspect reminded him of the Irish typhus as he had seen it in the Dublin Hospitals. Now, this predominance of typh-symptoms was due to over-crowding aided by sewer-gas. Tents were immediately procured for the sick, and improvement was immediate.

Thus, modifying circumstances, as ochlesis, may give to every fever quite a change of type or form. Our once great authority, Rush, says, "There is but one fever," no matter what its source, cause, or development; "we might as well say that men are of different species because they are tall or short, or because some are long and others short-lived, as that fevers are of different species because they vary in their symptoms and duration." We need not accept such view to make the assertion that fever has certain unities never obliterated by its forms, and that some of these defy strict nosological arrangement. I have frequently had to treat continued fevers that did not correspond textually with any one of the three predominant forms, typhus, typhoid, or typho-malarial.

In 1879 I attended many cases of continued fever in this city, which had some peculiar characters, and of which I gave a brief verbal account at a meeting of the Baltimore Academy of Medicine. The reporter (*Maryland Medical Journal*), following my language pretty closely, says, "Dr. McSherry spoke of the so-called typho-malarial fever. It is not distinctly typhoid, nor typhus, nor malarial, though doubtless there is in it a malarial element. He should be disposed to call it 'typh-fever,' after Chambers. Quinine will not break it up. A remarkable feature about it is the disproportion in the pulse and temperature. For instance, in one case the temperature was 103° F. while the pulse was 80, and this relation continued for about three weeks. Once the pulse went up to 108, but the temperature then was 107° F. With such a temperature as this we should have a right to look for a pulse of about 160. The patient recovered. He had heard of a case in which the temperature rose to 109° F., with a fatal result. In the case of a medical student, æt. 24, when first seen the temperature was 102° F., the pulse 92; the next morning they were respectively 105° F. and 86. The highest pulse-beat at any time was 96, the temperature being at the same time 104.1° F. He read from a letter just received from Prof. Bartholow, of Philadelphia, in reply to some inquiry upon the subject. Prof. Bartholow said that he had seen many such cases in Cincinnati, and that the disease was there called typho-malarial fever. He had obtained the best results from the following:

"℞.—Tinct. iodin.,
Acid. carbolici, partes equales.
S.—Gtt. j–ji quartâ vel sextâ quaquâ horâ.

"Quinine, he says, does nothing more than reduce the pyrexia. When diarrhœa occurred he used liq. potass. arsenical. gtt. j and tinct. op. deod. gtt. ij-v every four hours.

"Dr. McSherry thought quinine was wantonly wasted under German authority," etc.

I will recur to the use or misuse of this potent agent a little later.

Several other members of the Academy reported at different sittings, cases more or less resembling those. Thus in Dr. McKew's experience: "It is a continued fever lasting five or six weeks, with somewhat erratic thermometric phenomena, no diarrhœa as a rule, no rose spots, no intellectual impairment, no involvement of the pulmonary mucous membrane, no tenderness in the iliac regions, tongue free from typhoid characters. One case exhibited very obstinate constipation."

Dr. Thomas, Dr. Van Bibber, Dr. Williams, and Dr. O'Donovan gave accounts of their fever cases. Dr. Thomas considered his to be typho-malarial; not so Dr. McKew, who said "there was nothing of the typhoid character in it except continued fever. It is a zymotic poison, the nature of which is entirely unknown."

As the world is very intolerant of nameless diseases, we may call such cases typho-malarial in our daily rounds, conventionally, whatever may be said of them in medical discussions.

Malarial fevers proper are pretty uniformly held to be *intermittent* or *remittent*, but they may be *continued*, at least, without any typhous complication. A very excellent paper on this subject, under the title of "Fevers of the Mississippi Valley," appeared in the American Journal of the Medical Sciences (April, 1881), from the pen of Dr. R. B. Maury, of Memphis.

The malarial continued fever is not to be confounded with the bilious remittent, which, as Dr. Maury says, has a natural tendency to defervesce on the fifth day, may be terminated on the third, and only in exceptional cases will last until the seventh or ninth day.

The malarial continued, on the other hand, "presents a stadium of increase of about one week, a stadium of height of about five or six days, and a stadium of decrease, which terminates completely on the twenty-first day."

Is this typho-malarial fever? By no means, though often so designated.

"Its thermometric range is decidedly lower than that of typhoid. It seldom goes above 103.5° F. Vomiting of bile is a common symptom during the first days of the attack. Bronchial catarrh is generally present. Constipation and a concave abdomen are marked features."

Appreciable splenic dulness or enlargement was very rarely observed.

"All the essential features of typhoid or enteric fever are absent. There is no diarrhœa, no ileocæcal tenderness or gurgling, no meteorism, no eruption of rose-colored spots. As a rule, there is entire absence of abdominal symptoms."

This form begins, continues, and ends, says Dr. Maury, as a continued fever. It is somewhat notable that he declares "its duration to be in no way affected by the exhibition of antiperiodic remedies. The 'status typhosus' is not one of its characteristics. When it occurs it is exceptional, and is due to extraneous causes. The abdominal symptoms are absent, hence there would seem to be no relation to typhoid."

Some of our Baltimore cases correspond pretty much with those reported by Dr. Maury. I do not observe in them, however, any irregular relations between pulse and temperature, as noticed in this city and elsewhere, in our continued fevers, however they may be designated.

Prof. Johnston, of Washington City, describes some cases of mild continued fever which prevailed in that community (American Journal of the Medical Sciences, October, 1882). In his view such cases are truly typhoid, however imperfect the development. He gives an illustrative case of continued fever without typhoid symptoms for sixteen days, after which the patient was taken unexpectedly with "vomiting and violent pain in the abdomen, which soon became tense and painful; he was restless and very thirsty. The temperature had risen to 104° F., and continued to rise, and the pulse was 154. During the day he sank into collapse, with cold sweats, and died at 10 A.M. on the following day. The diagnosis of typhoid fever was justified by symptoms pointing clearly to intestinal perforation."

We suspect that Dr. Woodward would have had no hesitation in calling this an attack of typho-malarial fever.

It may be noted, *en passant*, that Dr. Johnston, in speaking of the influence of quinine upon his cases, says, "It lowers the temperature, but does not arrest the disease."

What must we think of this continued fever that in so many experiences resists quinine? It is not typhus, but is it malarial, typho-malarial, or typhoid? Or none of these, but one *sui generis?* The fact is, that with all our efforts at precision, and with all our attempts to confine a disease in a nosological strait-jacket, it will not be so restrained, for the simple reason that it rarely arises from a single cause, or if the cause be single, as some one miasm, contagium, bacillus, or germ, there are always modifying conditions to change its nature, as in the measles presented in the early part of this paper.

The medical sagacity which never makes mistakes in diagnosis, considering the liability to changes of form in most maladies, is rarely quite trustworthy. Yellow fever, for example, may come on as a remittent—indeed it is usually a remittent—the remission occurring, according to Sternberg, on the third, fifth, seventh, or ninth day; just as Maury says of the Mississippi remittents: "This fever often terminates on the third day; as a rule, it subsides on the fifth day. In the fall, it is occasionally prolonged until the seventh, and I have seen it prolonged to the ninth day."

Are not such observations very suggestive? I myself have seen corroboration of the following statement made by the late Dr. Fenner, of New Orleans:

"Physicians may say what they please about being able to distinguish a case of yellow fever as soon as they examine it. We do not believe it possible according to their ideas. Rarely does a summer pass in which we do not hear of some intelligent and experienced practitioner being perfectly astonished at what he had pronounced a case of intermittent or remittent fever terminate in black vomit or other hemorrhage."

Besides the cases of my earlier experience in the tropics, and subsequently among cases coming hither from Norfolk and Portsmouth, in 1855, I have seen an isolated case much more recently in which the patient was attacked, as I learned upon sufficient authority, with a remittent form of fever six days before his death. Under the influence of quinine, the fever remitted, but, before his death, the patient became quite yellow, and passed, while unconscious, bloody urine in bed. Urine drawn when dying gave no blood or albumen, but there was a pretty lively fermentation when nitric acid was added. I saw him only in this condition, and remarked then that I had seen similar cases in which black vomit was found in the stomach *post mortem*, though none had been ejected. And so it turned out. Upon examination of the viscera, the lungs showed at the base hypostatic congestion; the heart was soft, as in low fevers; the liver very small and anæmic; the kidneys congested, and showing various hemorrhagic spots of rupture or exudation. The bowels were congested. The mucous membrane of the stomach was somewhat eroded, and there were perhaps eight ounces of what would surely have been called in Vera Cruz *vomito prieto*, though, it being an isolated case, the physicians did not think it advisable to publish it as yellow fever. [I have since learned indirectly that, notwithstanding the macroscopic resemblances to yellow fever, the microscopic examinations subsequently made gave results tending to show that very rare disease, acute yellow—or I should rather say *red*—atrophy of the liver.]

Dr. Rush says the physicians of Philadelphia had thirteen different names for yellow fever as it appeared there under his observation.

Now that Dr. Carmona, of Mexico, has found a yellow fever fungus as distinct as Koch's bacillus tuberculosis, perhaps modern pathologists may find a ready solution of all doubts in regard to the diagnosis of this particular fever. Perhaps they will; more probably they will not. The world teems with germs, no doubt, that are destroying agents, or potentialities, but it will be a long time before their exact relations are understood to the disease with which they are found associated. Every thing about us perishable, or all that "wears the muddy vesture of decay" seems to have a being prepared to consume it. One low creature may find its nidus and food in tubercle, another in the white corpuscles of the vitiated blood of eruptive fevers; and there be saprophytes for the last consumption of decayed organic matter, but these are consumers, not producers. Many pernicious bacteria, we must believe, carry infection, which is rather *adherent* than *inherent* in their natures.

In the treatment of our fevers until we learn to cure them all by germicide agents, and allow our patients to die of nothing but accident, or old age, we must consider how best to use the two opposite classes of reconstructive and spoliative remedies, which may be fairly represented by cinchona bark, mercury, and bloodletting.

Such are potent agents for good and for evil; we wish to get from them the most of the one and the least of the other. The bark (quinine) is antidotal to malaria, tonic in small doses, sedative in large doses. By some property (germicidal?) it neutralizes the poison of malaria; it helps to build up the debilitated subject; it is competent to reduce temperature. These are obvious influences. Perhaps, when properly used, it is the best drug in the materia medica. But it is not, therefore, a panacea. Such agent does not exist in medicine. Granted its potency against the direct pernicious influence of malaria, it is not of peculiar efficacy against secondary lesions. It no more removes the after-effects of the poison than the antidotal chalybeates would cure gastritis or other secondary effects from arsenical poisoning.

Many of its partisans place in it too exclusive a trust. I have many times given it day after day in all kinds of doses when fever was yielding, but with unmitigated malaise on the part of the patient until some mild mercurial would be given for a few days, when, *presto*, the patient would improve in every sense. In the case of a lady now under treatment, suffering with malarial malaise, quinine offended the stomach and impaired the appetite until a few fractional doses of calomel came to the rescue and gave much relief.

In the various cases and conditions previously referred to in this paper, quinine, whether useful or not, was inadequate to cure. It was given freely in the typhous measles with whiskey, without preventing the fatal issue.

It appears to the writer that there is a great waste of this valuable agent of late years as, *e. g.*, when given in large doses for the reduction of temperature, when so many other medicines, to say nothing of ice or cold water, answer such purpose quite as well, if not better.

But it may prove a mischievous agent withal. Dr. W. O. Baldwin, of Montgomery, Ala., has published observations upon this subject; and showing such facts more recently, a paper published in The Medical News of July 21, 1883, from the pen of Dr. E. D. McDaniel, of Camden, Ala., gives confirmation to such views.

Dr. McDaniel reports eighteen cases of hemorrhagic malarial fever in his own practice, in which there were thirteen recoveries and five deaths. It is very significant that in six cases in which no quinine was used the result is stated thus: "In the six cases without quinine six recoveries, or 100 per cent."

Whereas, it is also stated, "In twelve cases with quinine five deaths, or 41.66 per cent."

Besides these eighteen, Dr. McDaniel saw six other cases in consultation. He had given all of his own small doses of calomel, with or without quinine. In regard to these six, he says that calomel was used in larger doses, and quinine and spirit of turpentine were freely given. The result was five deaths and one recovery.

It is by no means easy always to appreciate cause and effect in medicine, but if these cases had all been treated *à la* Rush, with the free use of the lancet, the unfortunate result would have been attributed directly to that agency. Physicians still have something to learn as to the proper use of quinine and bloodletting; the one, according to the fashion of the day, being too much used, and the other too much neglected. May it not be safer to reduce fever by the abstraction of a few ounces of blood than by drugging the whole mass of it as it circulates through every viscus and tissue of the animal economy?

Let us bring quinine to its right and proper uses, and reserve it for such purposes.

As to eliminants in fevers they do not play an inferior part, except in counteracting the first effects of malaria.

The observers of the last century were not men to have eyes and see not, as the men of to-day seem to suppose. It is true our eyes are aided by the microscope and other instruments of precision, but our fathers had good-sense and good senses, and made good use of their gifts.

"Sir John Pringle," says Rush, "long ago taught the inefficacy of bark in certain bilious fevers. But Dr. Chisolm has done great service to medicine by recording its effects in the Boulam fever. 'Headache,' says the doctor, 'a heavy, dull eye, with a considerable protrusion from its orbit, low spirits, thirst, and a total want of appetite, were the general consequence of the treatment with bark without the previous antiphlogistic.'"

I know not what particular antiphlogistic was preferred in these cases, but I am quite sure that a vomit and a purge (say with ipecacuanha and calomel) in the beginning generally render efficient service. I do not doubt that Warburg's tincture, which so often does good when bark has failed, has its good effect by elimination, and just such elimination as may be obtained from mercury and aloes.

Dr. Murchison would sustain this view. Mercury, in his opinion, "exerts a beneficial action in many functional derangements of the liver, in whatever way this may be explained. Patients of the greatest intelligence, suffering from hepatic disorders, constantly declare that they derive benefit from occasional or repeated doses of mercurials which no other medicine or treatment confers; and the scepticism of the most doubting physician would, I believe, be removed should he unfortunately find it necessary to test the truth of their statement in his own person." (*Croonian Lectures.*)

And what fever is known in which there is not functional derangement of the liver? This same authority further remarks, touching such derangements resulting in lithæmia, "I have repeatedly known patients in this state improve at once on substituting abstinence from alcohol with aperients, blue pill, alkalies, and careful regulation of diet, for quinine, iron, the mineral acids, and stimulants; the strength, flesh, and color returning under what, at first sight, might have appeared a lowering treatment." I have often seen similar beneficial results from such change of management in many other morbid conditions as well as in lithæmia.

A medical address was sent to me some months since entitled "Fifty Years Ago," by Prof. Henry Gibbons, M.D., of San Francisco, which offers some interesting reminiscences as to the early use of quinine, *inter alia*, in this country. The white powder was brought from France, and "people were greatly astonished that eight grains of it should do the work of an ounce of bark, that is, arrest or break an intermittent. It was given with great caution. From eight to ten grains was the limited quantity. According to my recollection, the dose was more decidedly and permanently effectual than the large doses now employed. But the older doctors always prepared their patients first by a mercurial purge, or a few blue pills. They had an eye to the condition of the liver and spleen, and other organs which suffer from malarial diseases. Their practice in this respect might well be imitated by the present generation of practitioners, who too generally depend altogether on the one remedy in the treatment of intermittent fever."

The profession has become too much afraid of depletion, and has taken to depend too much upon quinine, tonics, and nervines. I attended a lady lately who has been a martyr to nervous headaches for years. A few small doses of mercury gave her more relief than any remedy she had previously taken.

I was called some months ago to a lady of full habit, whose flushed face, full pulse, and headache gave indications of cerebral disorder, perhaps of apoplexy. She was attended by an intelligent physician who had drugged her freely and had had her cupped on the back of the neck. I advised venesection, to which the doctor assented, and I drew from her arm about sixteen ounces of blood. Relief was prompt and, so far, permanent, for she has since been in better condition than for a long time previously.

We underrate the intelligence of our fathers when we pronounce that their bleeding and purging were all bad practice. That there was a great deal of bad practice in the abuse of such agencies may be freely admitted; but if we drop out of use all medicines capable of doing harm when misused, I know not what would be left, not even excepting chloride of sodium. Now, as of old, according to Ovid, *Nil prodest quod non possit lædere idem.*

The mercurial chlorides which had such vogue among the physicians a few decades back would not have commanded such universal confidence without some reasonable justification. Perhaps they will become rehabilitated in professional estimation as the germ theory advances, for, like quinine, they too are potent germicides, and it may be that a large part of their efficacy was due to this power, which was and is real, whether appreciated or not.

Be that as it may, I beg leave to declare, as the result of no small experience of my own, as well as that cited from others, that there is at this day too great reliance upon bark (quinine) to the neglect of depleting agents in fever; that quinine is not only wasted, but that it is used extravagantly, and even injuriously, and that *less* of it will accomplish a better purpose than *more,* when used with eliminants, always discreetly, of course, whether the agents be bloodletting, vomiting, or purging. An old-fashioned nitrous powder, or a few drops of Fleming's tincture of aconite, judiciously administered, will reduce fever more effectively than quinine, and then that transcendent agent may be used for purposes which no known medicine can equally well accomplish.

BALTIMORE, August, 1883.

ON THE VALUE OF IODINE IN MALARIA.

BY FRANK FINNEY, M.D.,
PHYSICIAN TO THE QUAPAW AGENCY, INDIAN TERRITORY.

IN view of the elaborate and carefully written article of Drs. Atkinson and Woods in the July number of THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES on the use of iodine in malarial fevers, and an editorial in THE MEDICAL NEWS of July 7th on the same subject, I feel called upon to give a brief account of thirteen cases of malarial fever treated by me during September and October, 1882, which very strongly coincide with the experience given in the above-named article. The treatment of my cases differed slightly from the above mentioned, since in all of them I used iodine in combination with carbolic acid, as advocated in the editorial referred to. The combination I used was tincture of iodine one ounce, glycerite of carbolic acid one drachm. This mixture I gave to adults in fifteen to twenty-drop doses four times a day, reducing the dose in proportion to the age of the patient.

CASE I.—Female, age two years; quotidian intermittent; had been sick one week when I was called; gave castor-oil cathartic, and followed with the iodine mixture, four drops in water four times daily. The child recovered, after having two more slight chills, with no other treatment.

CASE II.—Male, age 13, quotidian intermittent; gave a cathartic, and followed with iodine mixture, fifteen drops four times a day. He had one slight chill, followed by temperature of 101°, after beginning the treatment, and then recovery was complete.

CASE III.—Male, age 20, tertian intermittent; treatment same as Case II., with complete recovery without a second chill.

CASE IV.—Male, age 50, quotidian intermittent; gave the mixture in twenty-drop doses four times daily for seven days without any improvement, when it was abandoned, and quinine given with almost immediate success.

CASE V.—Male, age 10, quotidian intermittent; gave eight drops four times a day, with gradual improvement in all of the symptoms, until the fourth day, when vomiting and diarrhœa set in. By the sixth day, these symptoms were so severe that the iodine had to be abandoned. I then gave bismuth and morphine, followed by quinine, with success.

CASE VI.—Female, age 8; treatment and result same as Case V.

CASES VII. and VIII.—Adult males, treated for quotidian intermittent for seven days with fifteen to twenty drop doses of the iodine mixture, without improvement. Quinine was then substituted with success.

CASE IX.—Female, age 5, suffering from chronic malaria; chills every third day. Gave five drops of the iodine mixture four times a day, with iodine tincture externally over the enlarged spleen. The result was gradual recovery after severe jaundice.

CASES X., XI., XII., XIII. were all adults suffering from acute quotidian intermittent fever, and were treated with the iodine mixture in fifteen to twenty drop doses four times daily. Nausea and vomiting became troublesome in Cases X. and XI. on the fourth and fifth days, and it was abandoned. The iodine treatment was kept up for six days in XII. and XIII. with no improvement, when quinine was substituted with the usual success.

It appears from the above notes that *four* out of the thirteen cases treated recovered under the iodine treatment, while the large majority of *nine* had to have the usual quinine treatment before the disease could be controlled.

THE ELECTRO-MAGNET IN THE EXTRACTION OF FOREIGN BODIES FROM THE EYE.

BY OLAF PAGE, M.D.,
OF VALPARAISO, CHILI.

ON the 10th of July a workman from one of the large foundries in the city presented himself at my consulting-room. He said a piece of iron had struck him in the left eye. On removing the bandage I found a clean cut through the lower eyelid about one-eighth inch long, and another equally clean cut through the sclerotic and lower third of the cornea and iris. A clot of blood completely filled up the pupil. Having procured an assistant, I connected the magnet with a Stöhrer's battery of twenty cells, and applied the point of the magnet to the wound. I immediately heard the clicking of the foreign body against the magnet, but on attempting to draw it out, it fell back into the eye. This I did three or four times, but finding the iron could not come through the linear cut, I got the assistant to hold the point of the magnet in the wound, and then, with a pair of iris-forceps, I was enabled to lay hold of the iron and literally drag it out. The fragment, on weighing, proved to be a trifle over eight grains. It was bayonet-shaped, with sharp, serrated edges.

In cases of this kind I believe ivory forceps would be found very useful in connection with the electric magnet.

MEDICAL PROGRESS.

CANCER OF THE RECTUM; SCRAPING WITH SIMON'S SPOON; RELIEF FOR THIRTEEN MONTHS.—DR. J. CRAWFORD RENTON reports the case of a man, æt. 40, who had been suffering for six months from pain in the lower bowel, accompanied at times by considerable bleeding. On examination, the rectum was found filled with irregular hard masses, which passed for four inches up the bowel, commencing immediately above the anus; behind the urethra they were very extensive and closely attached to it, so that, anteriorly, it was difficult to separate them, they bled easily, and were evidently villous in character. Owing to their urethral attachment, he decided to operate by scraping the surface of the new growth, and not excising the rectum. He therefore scraped away a large number of the masses with the spoon. The urethra was closely involved with them, so that it would have been hazardous to its safety to have removed the rectum. The amount of bleeding was less than he expected, and was easily controlled by finely powdered matico. Chloride of zinc was freely applied to the raw surfaces previous to the introduction of the matico on lint. In forty-eight hours the lint was removed and the rectum washed out with weak Condy's fluid and water; and the following day the patient had a movement of the bowels without any trace of bleeding, the first time for four months that it and pain had been absent. He progressed favorably, and was sent home in a fortnight from the time of operation, and was ordered to take Chian turpentine internally. Since then he has continued free from pain and hemorrhage, and as a consequence looks much stronger. The bowel, when examined early in January of this year, showed that whatever growth had taken place had been slight. The patient declared that he felt great benefit from the Chian turpentine.

The great success attending the late Prof. Simon's operations on the womb in cancer led him to adopt a similar treatment in the above case; and he thinks that although we cannot expect any permanent benefit from it, if we can arrest hemorrhage and relieve pain for a few months by means of it we are entitled to do so. The masses removed were carefully examined and showed appearances characteristic of scirrhus.—*Glasgow Medical Journal*, Sept. 1883.

REMOVAL OF HYDATID TUMOR FROM UNDER SURFACE OF LIVER DURING PREGNANCY.—MR. F. C. BATCHELOR reports the following case: Woman, æt. 34; five children. About a year ago she began to suffer from severe pains in the right side, about the region of the liver. Three months later she consulted the reporter, who found a hard, irregular, solid-feeling tumor, about the size of a kidney, deep in the right lumbar region; it was movable, and could be dragged into the middle line, but returned on discontinuing traction. It descended somewhat on inspiration, and was covered in front by the colon. According to the patient's account, it was increasing rapidly in size. It was painful to the touch, and there were aching, shooting pains through it which kept the patient from sleep at night. Menstruation had been missed for three periods. Careful vaginal examination revealed a retroverted uterus, thought to be in the third month of pregnancy. From the history of the tumor, its hard, irregular feel, and the loss of flesh and pain, the diagnosis seemed to rest between a cancerous growth and a caseous gland. From its increasing size, it was determined not to delay operative measures on account of pregnancy. The abdomen was opened under Listerian precautions. The tumor was found to be an extremely thick-walled, irregular hydatid cyst growing out from the under surface of the liver. The cyst was drawn through the incision, and laid freely open, the delicate, lining membrane removed, and the sac well sponged out with a 1 in 20 carbolic solution. The cyst was separated from the adherent omentum with the finger-nail, and finally cut off level with the liver-substance. There was no bleeding of consequence. The wound healed by first intention, and only required one dressing. There was no constitutional disturbance whatever, and the patient was able to leave her bed in less than a fortnight. Pregnancy ran its natural course, and she was safely delivered.—*Australian Med. Journal*, June 15, 1883.

SALICYLATE OF SODA IN PHLEGMASIA ALBA DOLENS.—M. VIGAR states that he has attended four cases of this affection. In the first he used no internal remedies, limiting himself to the local measures advised by various authors, keeping the patient in bed two months, and even then a certain degree of œdema remained, with a few nodosities on the course of the inflamed veins; these disappeared very slowly, and at the end of five months slight traces of them were still discoverable.

In his other three cases he used the salicylate of soda, with very good results. He gave it to the extent of one drachm per day, and after the first day found that the temperature fell very decidedly, the pulse became slower, and the œdema diminished to a very notable extent; the disease passed through its phases of inflammation and repair in so short a time that not one of the three patients was confined to bed longer than the third week. No signs of œdema or of nodosities on the limb remained.—*Glasgow Medical Journal*, Sept. 1883.

DIMINUTION OF UREA IN CANCER.—DR. W. ROMMELAÈRE, publishes a series of clinical observations illustrating a new fact in the pathology of cancer. He finds, in thirty-four cases, that in persons subject to cancer, the amount of urea daily eliminated progressively diminishes until it is below ʒiij. By studying the urea eliminated in cases, for example, where doubt exists between gastric ulcer and cancer, a diagnosis can be made. In twelve cases of ulcer of the stomach, the daily amount of urea eliminated was about ʒvj.—*Medical Record*, September 15, 1883.

QUEBRACHO IN DYSPNŒA.—DR. MARIANI, from recent experimental and clinical studies of the action of quebracho, draws the following conclusions:

1. Quebracho is a medicine whose principal effects are shown by a diminution of the number of the respirations and cardiac contractions.
2. Its action seems to be especially concentrated on the circulatory centre, on which it has a tonic action in regulating the contractions, either directly or by the intermediation of the nervous system.
3. Quebracho may be considered as the only medicine which has a manifest antidyspnœa. It combats the dyspnœic symptom alone, and without the aid of other medicines.
4. It is highly probable that the symptomatic dyspnœa of acute affections of the thoracic organs may be amenable to quebracho.—*Journal de Méd. de Paris*, August 25, 1883.

MOLLUSCUM CONTAGIOSUM.—MODRZEJEWSKI reports one of the most curious and interesting cases of this affection on record. The tumors numbered more than three thousand, varying in size from that of a pea to that of a child's head. M. inclines to the opinion of Recklinghausen, who considers these tumors of the skin as neuro-fibromata, and therefore calls the affection neuro-fibromatosis.—*Gaz. Hebdom.*, Aug. 24, 1883.

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SATURDAY, SEPTEMBER 22, 1883.

THE FEVER AT RYE BEACH—SEPTIC OR TYPHOID?

In a previous editorial on "Sanitary Sins at Rye Beach," we explained the local conditions producing a form of fever at that place. We have now to consider the fever, and ascertain, if we can, the nature of this morbid complexus. Is it septic or typhoid? That we may not be misunderstood, the sense in which we employ these terms must be defined. By *septic*, we mean a form of fever produced by decomposing organic matter received into the system of man. Decomposing organic matter, in contact with the solids and fluids of the body, sets up a change at the points of impact, which gradually extends, until widespread alterations ensue, and a febrile condition is established. Probably we should say. *not all, but some kinds of organic matter* are capable of inducing this process of change. It is to this morbid process that we venture to apply the phrase—*septic fever*.

On the other hand, the disease known as *typhoid fever* derives its existence from a germ, a microbe, an organism. Although this object has not been demonstrated, the facts warrant us in assuming its existence, and hence it can be affirmed that, without the presence of the typhoid germ, there can be no typhoid fever. Is the fever at Rye septic or typhoid? Can the presence of a typhoid germ be predicated on any facts in the disease history of the place? Has the fever at Rye the clinical characteristics of typhoid? We can answer both of the latter questions in the negative.

In respect to the development of fever at one point, but two of the cottages are concerned—one new, and occupied for the first time; and the other six years old, standing within forty feet of the former. The first cottage was occupied by a family free from illnesses of any kind, and a careful investigation has demonstrated that there had been no cases of fever in the other family during the six years of their residence. The occupants of the beautiful new cottage, admirably equipped in every way, except in respect to the pollution of the water-supply, could not, then, have received typhoid germs, although they were unfortunately made to imbibe decomposing organic matter. The water-supply of other boarding-houses in which cases of fever occurred may or may not have been free from typhoid contamination. We are thus able to eliminate typhoid germs as a cause of the fever in the case of the occupants of the new cottage. We are absolutely certain that the water-supply contained a large quantity of organic matter—animal matter in a process of decomposition.

The clinical characteristics of the fever in the cottages have a special diagnostic value in view of the absence of any source whence typhoid poison could have reached the inmates. Without entering into minute details of the differentiation, certain broad marks of difference may be readily stated. The prodrome consisted in the state known as *malaise*, and did not differ from typhoid except in the irregularity of its development. Instead of a gradual increase in the severity of the symptoms, there were periods of apparent restoration to health, of variable duration, so that the progress made was in a succession of leaps. There can be no formulated statement made of the temperature when the disease was fully developed. In other words, the temperature-curve followed no definite law. There were no regular periods of exacerbation and remission, and during the apparent maximum of the fever, a decline of temperature, sufficiently rapid to be like a "lysis," would occur, and for several days the normal thermal line would be established. During the protracted evolution of some cases, there occurred several of these apparent attempts at convalescence, so that the course of the fever was made up of a succession of relapses. It would be mere supererogation to point out the fundamental differences in the thermal range of this fever and that which is so characteristic of typhoid.

In respect to the nervous symptoms, the differences between these fevers were even more marked. In the cottage cases at Rye there was a more or less profound adynamia, but no stupor, no delirium, nothing of *coma-vigil*. The slowness of intellection observed was that of cerebral anæmia, and was not comparable to the mental hebetude, the low muttering delirium, and the coma of typhoid.

There was no eruption—none of the rose spots of typhoid; but in one case there were large vibices on the sacrum and on the great trochanter. The formation of these occurred at the time of greatest depression, and were coincident with more or less bleeding at the nose and gums. The condition of the blood—probably, for there were no means available at that place for its proper investigation—was the chief element in the morbid complexus.

Complete anorexia—an absolute loathing of food, indeed—the tongue heavily coated, and the breath fetid, were usual symptoms. Diarrhœa was the exception, constipation the rule; in the former condition there was more or less tympanites when gurgling in the right iliac fossa occurred on pressure; in the latter condition the abdomen was rather flat, and in both it was observed that the flatus and the stools had a marked degree of fetidness.

In severity and duration there was no uniformity. A ratio between the severity of the cases and the quantity of polluted water consumed could usually be made out, but in the fatal case at the cottage, and in another one at a private hotel, there were complications, in a large sense accidental, which had much to do with the termination. Unfortunately, no post-mortem examination was allowed, so that we are denied the final facts of the clinical history, and of the means of confirming or rejecting our theory of the fever.

We may shortly see in print, we hope, from the pen of Dr. Nichols, the physician at Rye, an elaborate and entirely accurate account of the cases of fever which have occurred there, together with the valuable and pertinent observations which he has made on the etiological factors. We can only give the general impressions of an observer having the opportunity of personal contact with the more important and salient facts. The reader will gather that our observations tend to establish the proposition that the fever developed in the new cottage at Rye had its origin in the pollution of the water-supply with decomposing organic matter, and that the type of this fever is different from typhoid. Clinically it presents some analogy to relapsing fever. We believe, however, that it is a distinct form, and may be entitled *septic fever*, if our definition be accepted.

COLLECTIVE INVESTIGATION OF DISEASE.

The first number of the *Collective Investigation Record*, recently issued by the Committee of the British Medical Association in charge of this subject, enables us to judge more accurately as to the possibility of coördinating the work of individual and scattered members of the profession so as to produce valuable results, and also as to the merits of the particular method to secure this end adopted by the Committee, than was possible at the time of our comment on this subject last month.

It certainly seems that the plan is a good one, and that interesting and useful results have already been obtained. Vague conjectures and guesses as to the connection of a given disease with certain circumstances of the environment, or as to the connection or relative frequency of certain symptoms, derived from a limited field of observation, can be replaced by positive data sufficient in number to permit of the application of statistical methods.

Much praise is due to the Committee for the manner in which they have thus far managed the work, which must have involved an enormous amount of labor. Over 1000 English physicians sent in answers to the question as to observed facts bearing on the communicability of phthisis, the majority it is true being simple negatives, and over 400 reports were sent in on the subject of pneumonia. This is a good commencement, and it is time that the physicians of the United States should begin to aid in the work.

It will be remembered that the coöperation of American physicians was invited by the English Committee in a communication which was presented to the American Medical Association, and was referred to a standing committee, of which Dr. N. S. Davis, of Chicago, is chairman.

In an editorial on the subject in the *Journal of the American Medical Association* for August 25, Dr. Davis suggests that "if each State Medical Society could be engaged in the work of establishing the proper sub-committees in the several districts or counties of its own State, and through a State committee receive the returns from the sub-committees, and after their examination and arrangement, transmit them to the General Committee of the National Organization, it would be more likely to secure results of value, both in regard to quantity and quality, than by any other method." It seems to us that a less complicated method than that suggested is desirable, at least for a commencement. There certainly seems to be no necessity for having the returns sent back through sub-committees and State committees for examination and arrangement. Why should not each observer send his return directly to the Chairman of the General Committee?

Moreover, the Chairman of the General Committee ought to be able to select at once from the members of the Association at least half a dozen physicians in each State, and call on them to make a commencement, using at first the sets of questions prepared by the English Committee. When these gentlemen have become familiar with the work by actual trial, they will be the proper persons to bring the matter before State and local societies, and secure a larger body of observers.

No doubt we shall have questions of our own presently, enough and to spare, but at first it seems to us that the wisest thing that can be done is to obtain answers to the English queries, and to forward these answers to the English Committee for collation and comparison with the data which they collect in their own country. The results will appear in their record, which will thus become an international one. There need be no fear of loss of individuality, and very soon we can in turn call for aid from across the Atlantic in the solution of some of our own special problems. The best way to make a beginning is to begin, and to secure this, individual, direct effort is worth any number of committees.

In the editorial above referred to, Dr. Davis gives the English memorandum on pneumonia and the schedule of information desired for each patient suffering from this disease. Are there not among the members of the Association, all of whom receive the Journal, two hundred physicians willing to commence at once to make observations, and forward reports, if asked to do so by the General Committee? We certainly think there are, and that the sooner such a request is made the better. No doubt some of the returns forwarded at first will not be complete, or specially valuable, but even these will have an educational value to those who make them, and in this way the real workers will become manifest. It is to be hoped that the experiment will, at all events, be tried without waiting for the action of State societies; in fact, as suggested above, it will be an excellent means of securing action on the part of such societies, the importance of whose coöperation we by no means undervalue.

EXTIRPATION OF THE THYROID GLAND.

With the exception of Billroth, of Vienna, no surgeon has had so large a personal experience with strumectomy, thyroidectomy, or extirpation of the thyroid gland for benign and malignant tumors as Kocher, of Berne, who has made a most valuable contribution to the subject in the current number of the *Archiv für klinische Chirurgie*. From having been one of the most fatal, it has, under improved methods of operating, which refer principally to the avoidance of hemorrhage and aseptic measures, gradually become one of the most successful of the major surgical procedures, especially when the gland is the seat of the innocent neoplasms. The truth of this statement is shown by the statistics which Kocher has collected from various sources, the majority of the cases having, however, been met with in Switzerland. Thus of 70 operations performed prior to 1850, 41 per cent. proved fatal, while of 146 practised previous to 1877, only 21.2 per cent. were lethal. Since 1877, 268 cases show a mortality of only 44, or 16.4 per cent., the rate of deaths for the malignant having far exceeded that for the benign growths. Of 28 examples of the former, 16, or 57.1 per cent., perished, while of 240 instances of the latter, 28, or 11.6 per cent., were fatal. It is, moreover, of great practical interest to note that, of the 268 cases, the entire gland was removed in 115, with a mortality of 12.1 per cent., which is not greater than that after partial extirpation.

The individual experience of Kocher relates to 101 cases, of which 13, or 12.8 per cent., died, a most excellent result, when the magnitude and dangers of the procedure are taken into consideration. Of his last 43 operations, which were performed with antiseptic precautions, all save 3, or 6.9 per cent., survived. Of these, 4 were for malignant growths, and 39 were for innocent tumors. Of the former, 1, or 25 per cent., was fatal, while of the latter, 2, or 5.1 per cent., perished. This small mortality forms a striking contrast with the experience of Julliard, of Geneva, recorded in the *Revue de Chirurgie* for August of the present year. Of 31 operations performed by that surgeon for benign formations, 5, or 16.1 per cent., proved fatal. Of 8 partial extirpations, all recovered, while of 23 total excisions, 2 died upon the table, and 3 succumbed subsequently.

In a voluminous and exhaustive paper, contributed to the *Bulletin de l'Acad. Roy. de Med. de Belgique*, for 1883, Liebrecht, of Lüttich, has analyzed 322 cases of strumectomy, with the result of confirming the conclusions of Kocher. He shows that total extirpation is not more fatal than the removal of portions of the gland, and that the mortality has progressively decreased, under more careful management, until it has reached 14.81 per cent. for the past six years.

THE AMERICAN GYNECOLOGICAL SOCIETY.

The eighth annual meeting of this Society in Philadelphia, the proceedings of which we give in another column, calls forcibly to mind the remarkable progress of this specialty in the comparatively short time it has existed. It is quite within the memory of the younger members of the profession when gynecology was little more than a name, scoffed at by the teachers of "Obstetrics and Diseases of Women," and regarded with some curiosity by others in the profession, whose field of labor this new department did not invade. But in a very few years the obstetricians have seen this new birth grow into a most vigorous and brilliant adolescence. In so short a time the representatives of the specialty of gynecology have contributed not only to the saving of life and health in their own domain by ways heretofore unthought of, or deemed impracticable, but also to the solution of some of the gravest questions in the practice and philosophy of general surgery.

Gynecology now stands before the world as a well-defined and, it must be admitted, a well-regulated specialty. It contains within itself the elements of safe guidance; for among the number of its most devoted and most eminent followers are to be found those who constantly warn their less discreet fellows of the impropriety and danger of zeal without knowledge.

In the meeting just held, for example, several of the most distinguished speakers condemned the practice of too readily making vaginal examinations of young unmarried women, which not only is—as it was there characterized—a sin, but also has brought reproach on the specialty. The duty of refraining from operation when not clearly demanded was also dwelt upon. Thus it is seen that the principles of true conservatism did not lack able support in this meeting, and a large amount of attention was there bestowed upon subjects which make no appeal to a love of glory. The discussions were full and intelligent. The various subjects, almost without exception, elicited the opinion of those best fitted to speak concerning them, and the papers and discussions together constitute an important and valuable addition to the literature, not only of gynecology, but also of the science of medicine, of which it is just now so conspicuous a part.

Several of the New Jersey seaside resorts are busy on the subject of water-supply. Long Branch finds its supply insufficient to the extent it has endeavored to furnish. Atlantic City has now a full and abundant supply.

Ocean Grove has just completed a driven well which furnishes an abundant supply of good water. An analysis has been made by Prof. F. A. Wilbur, of New Brunswick, which shows it free of all organic matter. The mineral matter gives but 8 grains of solids to one gallon of water. The success of this well will probably lead to the driving of several others in different parts of the town, which will be controlled by the Association, and will furnish an abundant supply for all.

The issues of the *Melbourne Argus*, between May 26th and June 21st, are teeming with correspondence in relation to the case of one Rev. Mr. Danne, who, after serving, as is alleged, as a dresser or clinical clerk in a hospital for twelve months, and having attended certain courses of lectures in an irregular and unsystematic manner, came to America, and at the end of nine months returned a full-fledged M.D., with a diploma from the Medico-Chirurgical College of Philadelphia.

We ascertain that Mr. Danne did graduate from the Medico-Chirurgical College in March last, but we can hardly think it possible that he was graduated with a knowledge by the Faculty of the limited preparation charged in the Australian journals. It is more likely that he claimed *ad eundem* qualifications which were unwittingly received by the Faculty. Too much vigilance cannot be exercised by our medical schools in admitting to advanced standing, and only the most conclusive evidence should be received as to instruction claimed to have been received elsewhere. The standard claimed by the Medico-Chirurgical College is a high one, and if adhered to, in view of existing competition, reflects great credit upon it.

The affair is to be regretted, because it furnishes foreign journals a chance to give another fling at the American medical diploma, which is already low enough in estimation abroad, where no discrimination is made as to its source, almost all schools sharing alike in the general opprobrium.

Since it is impossible to elevate the general reputation of the American diploma, in the face of the constant indifference of certain schools at home, it is important that those colleges which do affect a high standard should live up to them.

SOCIETY PROCEEDINGS.

AMERICAN GYNECOLOGICAL SOCIETY.

Eighth Annual Meeting, held in Philadelphia, September 18, 19, and 20, 1883.

(Specially reported for The Medical News.)

First Day, Tuesday, September 18th.

Morning Session.

The Society met in the Hall of the College of Physicians, and was called to order at ten A.M., the President, Dr. Gilman Kimball, of Lowell, Mass., in the Chair.

Dr. Duer, of Philadelphia, made a short address of welcome.

On motion, the following gentlemen were invited to attend the sessions as guests of the Society:

Dr. Alfred Stillé, President of the College of Physicians of Philadelphia; Dr. W. M. Welch, President of the Philadelphia County Medical Society; Dr. R. A. Cleeman, President of the Obstetrical Society of Philadelphia; Dr. James Tyson, President of the Pathological Society of Philadelphia; Dr. R. P. Harris, of Philadelphia; Dr. J. R. Page, of Baltimore; and Dr. Robert Wilson, of Baltimore.

Dr. Joseph Taber Johnson, of Washington, D. C., then read a paper on

SUPERINVOLUTION OF THE UTERUS.

In this he said he wished to call attention to a disease of the uterus which Sir James Simpson named and described over thirty years ago; but in regard to the settlement of the true etiology and treatment of which so little progress has been made, that he introduced the subject here with the hope that a discussion might follow which would throw light upon it.

Though scarcely referred to by the text-books, Barnes believes this condition to be far from uncommon.

Frommel found it present in twenty-eight out of three thousand gynecological cases, that is, in almost one per cent. of all cases treated.

Superinvolution should be distinguished from atresia of the uterus, undeveloped uterus, or one whose cavity has become obliterated by inflammatory process not involving the diminution of the organ. As the name implies, superinvolution occurs only after the process of involution has been set up after the emptying of a uterus once occupied by some body which has produced an increase in its size, as, for instance, after hydrometra, physometra, hydatids, the removal of uterine tumors, as well as upon the conclusion of utero-gestation, or abortion. The process may be carried from the slightest shortening to the complete disappearance and obliteration of the entire uterus and ovaries.

As a clinical contribution to the subject, he related points in the history of four cases in his practice.

The first case, aged 26, began to menstruate at 14, and continued without interruption until her pregnancy, five years ago. She was delivered with the forceps. The child was still-born. The mother did well until the third day, when symptoms of septicæmia developed. A laceration of the cervix and perineum was found, but no metritis. She made a good, though somewhat slow, recovery from the septicæmia. Later on, she had a continuous leucorrhœa, offensive at the time of her menstrual periods, backache, and distressing sick headache, culminating in absolute prostration on the day when the menses should have appeared. After two years her abdomen enlarged, and she believed herself pregnant, but at about the date of her supposed accouchement she began to lessen in size, and soon regained her usual figure. During this spurious pregnancy there had been a notable general increase of flesh, which remains to the present day. She had not menstruated since the date of her actual conception. Being asked to see her on account of this fact, two years ago, the only explanation of her persistent amenorrhœa found was a uterus measuring less than two inches in depth, hard, fibrous, and movable in all directions upon the point of the sound. Manipulation caused not the slightest pain. The shortness of the uterus being attributed to a distinct bilateral laceration of the cervix, he supposed that its restoration might perhaps cause a reappearance of the catamenia. The edges of the laceration had never healed. She had lost all sexual desire, intercourse was distasteful, and was at times followed by a slight flow of bloody mucus.

The operation proved successful only so far as to relieve the existing lesion, to cure the offensive leucorrhœa, and backache, and to restore the sexual appetite. The sick headaches became less severe than formerly, but did not quite disappear. The uterus remains hard and firm, and still measures less than two inches. The menses have not returned, and she is now only twenty-six years of age. She was subsequently treated with minute doses of ergot, nux vomica, galvanism inside and outside of the uterus, over the ovaries and sacral region, small blisters and massage, but nothing has been accomplished toward the development of the uterus or rousing it into functional activity. The patient now presents the appearance of the most robust health, though entirely without a sign of returning catamenial discharge.

The second case, aged 30, was in the best of health until nine years ago, when she had brain fever, followed by slow convalescence. Soon after getting up she had typhoid fever, and has since found it necessary to live free from mental or nervous excitement. Several years ago, she had a miscarriage, from which she made a good recovery, no fever or inflammation following. Four years ago, her uterus enlarged during eight months, but finally discharged a great quantity of water, since which time she had seen but little of her sickness. This began with uterine pain, backache, and headache, and continued less than two days; the discharge was red at first, soon became pale, and shortly ended with scarcely a stain. In December, 1882, her periods were about half a day and were growing less. The sexual instinct was strong. Her uterus measured less than two inches, and was hard, firm, and painless upon manipulation. She was treated with galvanism, minute doses of ergot, strychnia, counter-irritation, and massage, for three months, with excellent results, so far as the development of the ovarian and uterine functions were concerned. She menstruated seven days at her last period. Her husband tested her capacity for impregnation on the last day of her menses. She missed her next period, and during the next two months experienced many of the usual gastric and nervous disturbances of pregnancy. When she left the city, she was believed to be about two months advanced in utero-gestation; but her anticipations were never realized. The symptoms of pregnancy continued but a short time; the periods came on again, profuse at first, but gradually diminishing in quantity, until she had scarcely any, and showed no benefit whatever from her treatment.

The third case menstruated at 17. Her periods were always painful, irregular, and, as a rule, scanty, though several times they were quite profuse. She had been married three years when she presented herself for treatment, and was twenty-nine years old. Like the other two women, she was very anxious to become a mother. Upon examination, her uterus admitted the sound not quite two inches. She had never been pregnant, and therefore her case might hardly be called one of superinvolution, but it resembled the others so closely in the dimensions of the uterus, symptoms, and indications for treatment, that it was included in the paper with this qualifying statement. The uterus was freely movable. The roughest manipulation caused no pain nor hemorrhage. An electrode was passed through the internal os, while the opposite pole was held alternately over the uterus and ovaries, and occasionally over the sacrum for half an hour, three times a week. Her general health being good, no medicine was given. In the course of the second month of treatment, the organ gained somewhat in capacity, and the menstrual flow slightly increased. She suspended treatment July 1st, and went into the country for the summer, expecting to return and resume in October; but her periods have since shown so little change that she is discouraged, and thinks that it is of no use to persist. Had she remained longer under treatment, she might, perhaps, have been permanently benefited.

The fourth case had had two children. They were both dead, and she was anxious for another. She was only twenty-seven years of age, but thought her change of life had occurred, as her periods lasted now but a few hours, and after the first show the discharge became quite thin and pale. Her uterus measured but one inch and three-quarters. It was hard, very movable, and, like the others, painless upon manipulation. She was treated about like the others, but failed entirely to get any permanent good.

These experiences are far from encouraging, but the results are no worse than usually occurs in the experience of others. Sir James Simpson, who first called the attention of the profession to the symptoms, prognosis, and treatment of superinvolution of the uterus, in an article published in the *Edinburgh Monthly Journal of Medical Sciences*, in August, 1852, met with no better success.

The literature of this subject is not extensive, many of the text-books upon diseases of women not even mentioning its existence. The points upon which all writers agree, who devote any space to its consideration, are, that excessive involution of the uterus does, from some unknown cause, take place; that galvanism and electricity should be faithfully tried, but that the great majority of cases are incurable. Sinclair, of Boston, read a paper on superinvolution before the Boston Obstetrical Society in November, 1876, in which he explained the production of superinvolution as due to a lack of force in the nutrition with consequent enervation, whereby the fatty degeneration of the uterine fibres was carried beyond the normal point of arrest, with a failure in the renewal of the muscular fibres from their nuclei. Barnes says, superinvolution is produced when the disintegrating process set up after delivery goes on to such an excessive degree as to reduce the uterus to a size decidedly below its normal dimensions in the unimpregnated state. Dr. Walter Whitehead relates a case in the *British Medical Journal* for October, 1872, in which the uterus and ovaries completely disappeared after labor. Courty and Scanzoni mention these atrophied uteri following labor and abortion, and adopt Simpson's name. Hart and Barbour say frankly that the cause of this condition is unknown. Frommel attributed most instances to protracted lactation. This could not have been the cause in two of the author's cases, as in one the child was still-born, and the other followed a miscarriage. Inflammation causing a destruction of the ovary by atrophy, or by compression by the products of inflammation, may result in atrophy of the uterus. Klob has seen cases associated with the tuberculous diathesis. Edis says that cases not unfrequently occur where the mere effort of reproduction has been too much. Superinvolution of the uterus occurs and amenorrhœa follows. As a natural consequence there is a cessation of all further functional activity of the generative organs. When this condition occurs there is little or no hope of accomplishing restoration by any known form of treatment; but judging from the first and fourth cases of the author, where the physical organization remained so perfect it would seem that something might yet be done to enable these patients to bear children.

Dr. Fordyce Barker said that this trouble was likely to occur, not only in conception, but also after any abnormal development of the uterus; after fibroids, for example, the same process taking place as after labor. So after some cases of uterine catarrh. In all these conditions the uterus is increased, and afterwards there follows a state of retrogression. In all, the trouble depends upon the fact that this process passes its normal point. In regard to frequency, the experience of each one would be influenced by the fact that he was engaged in private practice, or had a large consultation practice. The latter would naturally see more cases than the former. He wished also to refer to a practical point, not mentioned by others, not even by the author of the paper; he had never formulated it himself before, although he had spoken of it to his friends. The point was in regard to the treatment—where treatment could be undertaken hopefully and where not. This depended upon whether there was an associated diseased condition of the ovaries. If the superinvolution was associated with arrest or deficiency of ovulation, very little could be effected by treatment; but when associated with active ovaries, it can be treated, and, he believed, much good could be done. He then gave the signs indicating activity of ovulation, and illustrated his point by a case in which, after an accident to a lady six months pregnant, miscarriage occurred, after which her menses were never normal, though she had the indications of functional activity of the ovaries, and was a great sufferer at her menstrual periods. He dilated her cervix before each period, and treated her with iron and other tonics during the intervals. The result was that she became pregnant again, and has had another child. He also narrated two other cases of the same sort.

Dr. A. Reeves Jackson expressed his surprise at the evidence of comparative frequency of this condition, as indicated by the author of the paper. He had seen but a single case, and that was of doubtful diagnosis. A patient of his after labor had defective lactation; her menstrual flow did not reappear; her mammary glands shrivelled; her skin wrinkled, and she had all the appearance of premature old age. Her cervix was button-like and small. No os was discernible. The body was felt with great difficulty, and was very small. The ovaries were not detectable at all. A sound could not be passed into the depression in the cervix which he took to be the os. Finally he took a probe, and pressed it in, and it passed on and on until he was alarmed, and concluded that he had punctured the fundus. This, however, did no harm. He tried the use of a galvanic stem pessary, but this did no good. He questioned whether this was a case of premature climacteric, or one of superinvolution. He considered the point in regard to treatment made by Dr. Barker to be of great importance.

Dr. Van de Warker, of Syracuse, called attention to a possible source of error, depending upon the atrophy of the posterior lip of the cervix, so common in lacerations. This would make the uterus seem to measure much less than normal.

Dr. H. P. C. Wilson, of Baltimore, said that while he has seen many cases of undersized uteri in unmarried women and those who have not borne children, he has seen only two or three cases in those who have been pregnant. He considers this a very rare occurrence, much more rare than would be supposed from the paper just read. Dr. Barker, he thought, got at the kernel of the matter in deciding as to the prospect of recovery, and his experience would bear out that of Dr. Barker.

Dr. Robert Battey, of Georgia, spoke of this condition as one of the results of the operation known by his name. The removal of the ovaries is the cause of atrophy of the uterus. The question is one of the ovaries and not of the uterus. The condition of the uterus depends upon want of proper ovulation. He does not agree with Lawson Tait in depressing the influence of the ovaries. The latter regards them of comparatively little importance. The best treatment consists in the use of electricity applied so as to influence the ovaries rather than the uterus. At the same time, the cavity of the uterus may be dilated with tents or by some other means.

Dr. Byford, of Chicago, said that the subject was one not yet exhausted. There still was a great deal of confusion in connection with it, and little actual knowledge. The process was not well understood, but a distinction should be made between superinvolution and atrophy. The question is, whether superinvolution is one of the stages toward atrophy or not. So long as the uterus retains its characteristic fibres, there is a chance of its recovery. He would divide the subject into simple and complicated superinvolution. In the former, the uterus alone is affected; in the latter, both the uterus and the ovaries. After labor there is a change in the whole of the pelvic contents, the ovaries as well as the uterus. But sometimes the involution of the uterus is greater than that of the ovaries. The condition of the ovaries naturally affects the question of the cure, since the uterus shares the processes of the ovaries. He agreed with Dr. Barker as to the indications for treatment. He would use before the periods, uterine pessaries to cause local congestion, which the ovaries would keep up.

Dr. H. F. Campbell, of Georgia, did not think it necessary that the ovaries should be involved or that there should be atresia. He cited a case where sterility followed great distention of the uterus by dropsy of the amnion, though ovulation continues.

Dr. Johnson closed the discussion. He expressed pleasure at the point made by Dr. Barker, in regard to treatment. He also thought that superinvolution of the ovaries might be a cause of superinvolution of the womb, but did not think it could be regarded as the only cause; and when the activity of the ovaries continues, treatment of the uterus is likely to be successful. Where the ovaries are involved, all treatment is ineffective. In regard to the point made by Dr. Van de Warker, he would say that, in a case where the latter supposed there might have been laceration of the cervix, he had taken note of this point, and it might be remembered that he had operated and cured the laceration, but the superinvolution was not benefited.

The next paper was by Dr. R. Stansbury Sutton, of Pittsburg, Penn., and was on the

IMPORTANCE OF CLEANLINESS IN SURGICAL OPERATIONS.

He said that, having been out of the country for some time, he would endeavor to bring before the members of the Society something which had been suggested by his observations while absent. He reminded his hearers that the era of open treatment, in which wounds were encouraged to suppurate and granulate, had been brought to an end by the treatment of quacks, who closed wounds up with a variety of substances. Formerly, the belief had been that all bad influences upon wounds came from within. In the present era the current theory is that all bad comes from without. The cell theory was soon followed by the germ theory. Organisms were found in wounds, which were believed to set up noxious processes.

Mr. Lister has endeavored to meet these dangers by carbolic acid and cleanliness. The consequence was greatly improved results. These were attributed at first to the carbolic acid, but it was afterwards ascertained that the amount of carbolic acid used was not enough to destroy the micrococci. A war of arguments and statistics followed, the outcome of which has been to prove that, under Listerism, surgery has achieved better results than ever before. But much of the misunderstanding has depended upon the assumption that Listerism is carbolic acid, and carbolic acid is Listerism. It has been shown by the experience of Keith, Bantock, and Tait that equally good results can be secured without the use of Listerism, yet it is premature to condemn the theory. There may yet be found another antiseptic, which will give better results than carbolic acid. It has been clearly shown that all bacteria are not malign. Bacteria swarm at the orifices of the body, yet we do not hear that the dental surgeons are troubled about them; and Mr. Allingham, in his operations upon the rectum, has had almost invariably good results, under what might be supposed to be the most disadvantageous circumstances. Nor is the danger uncommonly great in vaginal operations, yet some precaution should always be taken against noxious influences. Special cleanliness should always be observed in surgical operations. Since this was impressed upon the surgical world by Mr. Lister's methods, septic disorders have greatly diminished. For the attainment of the greatest cleanliness, time, knowledge, and constant practice are demanded, and Lister has taught us this, if anything. Carbolic acid, it should be said, is not to be denounced because of occasional unfavorable consequences, unless it can be shown that it does more harm than it does good. Very often the different results attained by those who practise Listerism and those who are opposed to it can be attributed to the difference of ability to attain cleanliness of person and instruments, and assistants and nurses, on the part of different surgeons. Keith has become such an expert in cleanliness that for him the spray was a disadvantage. In a three months' visit which he had made to Keith, all of the cases of the latter in which he had used the spray, occurring in the public hospital, died; and no case occurring in Keith's private hospital, treated without the spray, died. The Germans have received very great advantage from the use of Lister's method, for this has taught them the highest degree of cleanliness. German surgery is supposed to have formerly been extremely dirty, Now it is absolutely clean. If, after this lesson has been learned, the spray be dropped, the comparative effect of spray and cleanliness can be ascertained, because of the lesson of cleanliness taught by Listerism. He would recommend all surgeons to practise the antiseptic method until this lesson was thoroughly learned; then they may modify the system as experience may dictate.

Dr. Barker moved that the Nestor of American Surgery, Dr. S. D. Gross, who was present in the room, be asked to open the discussion. The motion was carried.

Dr. Gross thanked the Society for the compliment, but said he came to listen, and not to talk.

Dr. Emmet, being called upon by the Chair, said he had nothing to add. He would simply observe that he agreed perfectly with the remarks of the author of the paper. As he had elsewhere stated, he believed in cleanliness, and that the surgeon often carried the death-warrant of a patient under his finger-nails. He trusted to soap and water more than to any disinfectant. He spoke of the difficulty of controlling one's assistants, and stated that Tait does his own sponging, and does not allow his assistants to touch any instrument or dressing if possible.

Dr. W. T. Lusk, of New York, said that some things in the description of Listerism in the paper just read, would suit the most ardent Listerite. He agreed with the main point of the paper, but he objected to the inference which he thought might be drawn from it, that the spray was not only useless, but also harmful. Lister thinks there are certain influences adverse to healing, which are not appreciable by the senses, and he trusted to the spray to do away with these. Though micrococci resist five per cent. solutions of carbolic acid, yet this strength is fatal to the germs which produce putrefaction, and it is in the presence of putrefaction that the micrococci are dangerous. For himself, he felt that he could not give up entirely the use of the spray, although he knew the importance of the other points urged, since he had seen it effect such changes in the results of surgical operations in the hospital with which he was connected. In regard to the statement, that during Dr. Sutton's visit to Keith all cases treated with carbolic acid died, while all treated without it recovered, he must express his opinion that it was not attributable altogether to the carbolic acid; for, in 1878, when he saw Mr. Keith, the latter showed him the records of his operations, exhibiting a large number of consecutive recoveries under the spray, and told him that the English surgeons would have to come to the use of carbolic acid. At that time he was using the method of Lister, and yet his results were extremely favorable. Thornton, who still uses Lister's method, gets admirable results. Mr. Tait is the strongest believer in simple cleanliness, and scoffs at many points in Listerism, but he had the impression that Mr. Tait's success was largely due to exceptional address and skill on the part of the operator. For many of his abdominal operations he made a very small incision and operated with the greatest rapidity.

Still, while Keith, Bantock, and Tait may be allowed to do as they please, he thought that for many of us Listerism is a very good thing, and that it enabled even tyros to enter the ranks of the great coryphæi of surgery.

DR. WILSON, of Baltimore, referred to the obligation all surgeons are under to Lister. All practise, more or less, the method of Lister, although many of them abandon the spray. It has brought about such changes in the operation of ovariotomy, that not long ago Mr. Keith said that he thought no woman should die from the operation if she came to be operated on soon enough.

DR. CAMPBELL, of Augusta, Georgia, spoke in defence of the cleanliness of old operators, and repudiated the idea that they had learned cleanliness from Mr. Lister.

DR. SUTTON, in closing the discussion, said, in allusion to the statement that Mr. Tait used carbolic acid on his sponges, that he carefully washes all the carbolic acid out of them before using them in his operations. He thought that the day of the spray had gone by, and that if it ever did any good, it was by wetting the floor, and entangling the germs, so that they could not rise. Some of the most successful British operators were scrupulous in regard to their assistants. Mr. Keith had only one; Mr. Tait only one. On the contrary, Dr. Billroth had very many, and his methods were very different from those of Tait. He had remarkably good results, although he operated upon the most desperate cases, refusing no one who had any chance of life. He had no faith in statistics, in regard to laparotomy—so much depends upon the individual operator, and upon the different kind of cases which each may happen to have.

AFTERNOON SESSION.

On motion, Doctors R. P. Maury, of Memphis; Wm. E. Mosely, of Baltimore; W. P. Chunn, of Baltimore; and S. D. Gross, of Philadelphia, were invited to participate in the proceedings.

DR. ALBERT H. SMITH, of Philadelphia, then read a paper entitled

HOT WATER IN SECONDARY HEMORRHAGE AFTER PELVIC OPERATIONS.

The use of hot water, he said, had been first suggested in 1859 by Dr. Emmet. He himself had later begun the cautious employment of it to control hemorrhage after labor, and then adopted it regularly for the treatment of post-partum hemorrhage, and had come to regard it as the only needful treatment. He now uses it as a prophylactic, heated to a temperature of 115° to 120°, disinfected, and injected into the vagina in all cases of labor. He continues the injection until the water comes away clear of all tinge. He finds it grateful to the patients, and satisfactory to himself. In regard to operations, he spoke of the confusion and difficulty caused by hemorrhage. Here the hot water was not only harmless, but absolutely beneficial. In secondary hemorrhage, we have in the hot-water douche a remarkable aid.

He referred to some operations of Dr. Skene, in which the results had been very adversely influenced by hemorrhage, which influence might have been successfully controlled, and the results made successful, had Dr. Skene been familiar with the use of hot water as a hæmostatic. He narrated a very striking case of his own in which secondary hemorrhage occurred after a very difficult operation for the restoration of a badly lacerated perineum, and recommended the use of the hot-water douche on account of its simplicity and efficacy.

DR. REAMY, of Cincinnati, said that he had been for some time in the habit of using a stream of hot water on the perineum, instead of sponges, in every operation. He has also used hot water in secondary hemorrhage.

DR. CHADWICK, of Boston, being called upon by the Chair, endorsed the remarks of Dr. Smith.

DR. WILSON, of Baltimore, spoke of the method recommended by Dr. Smith as invaluable. It was apt to be overlooked because it was simple, but there was nothing so good in post-partum hemorrhage. He cited the case of a friend of his who encountered profuse hemorrhage after a Battey's operation. The hemorrhage came through the opening in the cul-de-sac of Douglas. At his suggestion, the nozzle of a syringe was passed into the peritoneal cavity, and hot water injected until it came away perfectly clear. The patient recovered. He thinks she would have died, except for this expedient.

DR. H. F. CAMPBELL spoke of the use of the tincture of iodine, one part to three of water, in post-partum hemorrhage, which he has found very satisfactory.

DR. MANN, of Buffalo, said that all the remarks thus far made had been favorable to the method, and he was sorry to have to say that his experience had not coincided entirely with that of Dr. Smith. About a year ago, he had used the hot water in an operation for cancer of the cervix which terminated fatally. He had removed the new growth with scissors all the way up to the internal os. He then injected vinegar until the whole cervix was perfectly clear and white. Seeing a small piece which he thought should be removed, he raised it and snipped it off; instantly the vagina was filled with blood. He injected vinegar, but it did no good; he then injected hot water, and the hemorrhage, if anything, was greater than before. He then tamponed; this, too, failed. He then used the Paquelin cautery, which checked the hemorrhage a little. He then tamponed with the persulphate of iron, but the patient became pulseless, jactitation came on, and in ten minutes the patient was dead. Dr. Mundé had a case of secondary hemorrhage, with the same result. The method was not infallible, and could not be relied on in every case.

DR. GOODELL, of Philadelphia, said that Dr. Mann asked too much of the hot water in his case. He had found the hot water particularly good for some cases, namely, those where there was oozing. It sometimes fails. It is not fair to compare hot water and vinegar. Hot water does good beyond the surface which it reaches, while vinegar only does good where it comes into contact. This he had found in cases of menorrhagia, where the use of hot water is successful, although it does not come in contact with the bleeding surface. In most operations he prefers vinegar, but for hemorrhage in general he thinks the best hæmostatic is hot vinegar, because with this we have the advantages of vinegar together with those of heat. At the Preston Retreat he uses constantly a mixture of vinegar and hot water after labor.

DR. FORDYCE BARKER, of New York, called attention to the necessity which sometimes occurs for great haste in checking hemorrhage. Sometimes one cannot wait. He cited a case, occurring last winter, where a newly married couple, arrived at New York, and on the first night the bride had a violent hemorrhage. A physician who was called in tamponed the vagina, and, this failing, packed it very thoroughly a second time. In a few minutes, however, the hemorrhage reappeared. He now cleared out all the clots, applied Monsel's solution, and filled up the vagina with cotton. In a few minutes oozing reappeared and he made a second application of the same kind. After this, he sent for Dr. Barker, who used the hot-water douche, but it acted very slowly, and the woman nearly lost her life from hemorrhage. He sometimes questioned whether the force of the hot water did not do harm. In a second case, somewhat similar to the one just mentioned, he had checked the hemorrhage by very gently applying cotton dipped in ergot. His objection to the hot water was that it took too long to act.

Dr. Byford, of Chicago, being called upon from the Chair, expressed his concurrence in Dr. Smith's views.

Dr. Smith, in closing the discussion, expressed gratification at the almost unanimous testimony in favor of hot water. In regard to Dr. Mann's case, he said that he had seen similar ones where the hemorrhage was completely controlled by the hot water. In such cases, when hemorrhage is profuse, one must get some slowing of the blood-current by elevating the hips, so that when the hot water comes in contact with the bleeding surface it shall be able to produce its full effect. Dr. Goodell, he thought, was really using hot water, when he spoke of the use of hot water and vinegar. This was simply water medicated with vinegar. In Dr. Barker's case, where the persulphate of iron had been used, he thought much of the difficulty may have been attributable to the action of the iron in preventing the possibility of the usual action of hot water. He, himself, had seen cases of post-partum hemorrhage where the uterus was firmly contracted, and yet a stream of blood the size of a goose-quill was issuing from it, where the application of hot water had stopped it promptly and effectually.

Dr. Goodell rose to explain that what he spoke of as hot vinegar was not simply medicated hot water, as Dr. Smith supposed, but vinegar heated by the addition of hot water.

Dr. C. D. Palmer, of Cincinnati, then read a paper on

SOME POINTS CONNECTED WITH THE SUBJECT OF DYSMENORRHŒA.

He spoke of the importance of the subject, its effects, direct and remote, and referred to the diverse opinions which are even to-day entertained concerning its true pathology and appropriate treatment. A short history of the mechanical theory, as advanced by Macintosh, Simpson, Sims, Barnes, and others, was given, the acceptance of which was most natural, because of its directness, simplicity, and plausibility.

In the light of modern gynecology, and with the present facility for thoroughness of pelvic exploration, no one can doubt that obstructions in the uterine canal do exist, and that these may serve to create pain in menstruation. They may arise from abnormities of the cervix, stenoses, congenital or acquired. These stenoses are by far more common at the external os than at the internal. Organic stenoses at the internal os, except from flexion, are quite uncommon. Obstructions may arise along the uterine canal from flexions and fibroids. Membranous dysmenorrhœa is a clear sample of impeded menstrual flux. Objections were made to much of the mechanical doctrine for the following reasons: A want of uniformity between the seeming causative lesions or abnormities, and the manifestation of symptoms. This want of uniformity is noticeable in the seat, degree, kind, duration, and time of the occurrence of pain.

When real obstructions do exist, the most severe attacks of pain are rarely present. A patient may writhe in the agonies of the most severe menstrual pain, when a medium-sized sound can easily be passed. Nor are labor-like pains characteristic of obstruction. Pain may reach its climax with the uterine cavity empty, and while not a single drop of blood escapes on the introduction of a bougie.

In reference to flexions, the pain is not in proportion to the degree of flexion, and straightening of the uterus by no means always cures it. A considerable proportion of cases of flexion are unattended by any menstrual pain, at least till some other disease is superadded.

The following varieties of cases have doubtless been witnessed by every gynecologist, and illustrate the want of uniformity referred to.

1. Instances of dysmenorrhœa, when no abnormal condition of the uterus, as to size, shape, position, circulation, or in the ovaries, or any pelvic tissues, can be detected on the most thorough exploration.
2. Instances of stenosis of the os externum, of most marked kind and degree, the result of chronic inflammation, or the use of caustics, and no menstrual pain.
3. Instances in which there are well-defined abnormities of the uterus, as in pin-hole os, elongated cervix, constricted canal, flattened and ill-developed body, flexion (ante-), and no dysmenorrhœa.
4. Instances of well-defined acquired flexion of the uterus, and no dysmenorrhœa.
5. Instances of stenosis of the os externum and cervical canal, associated with dysmenorrhœa, where treatment of a surgical nature proves successful in the relief of the former, while temporary or no relief attends the latter.
6. Instances of uteri with patulous canal and dysmenorrhœa.

From the evidence afforded by a study of the clinical history of these cases, we are forced to the conclusion, that not only is dysmenorrhœa not obstructive in all its kinds and cases, but that any impediment to the menstrual flux, as a factor in the production of pain, rarely, indeed, exists. The theory of dysmenorrhœa, based on mechanical obstruction, is not demonstrated.

The nature of the disease is best determined by studying uncomplicated cases, and finally, such as are associated with some organic affection of the uterus.

Reference was made to the extreme sensitiveness of the uterus, at or above the os internum, on the introduction of the ordinary sound in this disease. A slight discharge of blood sometimes follows; but this is not owing to congestion alone, being out of all proportion to it. The sensory nerves of the uterine cavity are in a state of hyperæsthesia or neuralgia. In such a condition, menstrual pain will be excited from the influx and flushing of the tissues with blood. The more dense these tissues, the greater the pain; the explanation of the greater frequency in the unmarried and nulliparæ. And, under such circumstances, local irritants, such as clots of blood, etc., may excite the uterus to painful contractions. But that clots cannot possibly be invariably the underlying cause is apparent by the occasional manifestation of these symptoms for hours prior to the presence of any flow.

Spasmodic action of the uterus as a condition of some dysmenorrhœas is abundantly proven, by the occasional behavior of the organ on the introduction of the sound, the ingestion of irritant fluids, and caustic crayons. Analogous action, we know, is found in the larynx, rectum, and bladder.

Dysmenorrhœa is, then, a functional disorder of the uterus, and, in its essential and underlying nature, a neurosis. It presents many features analogous to other visceral neuralgias, associated or not with organic disease, sometimes developed, but more often aggravated, by them. Clinical evidence points to the idea that the neurotic is the only feature in most cases, and is manifested to a greater or less extent in all.

The temperament of the dysmenorrhœic is generally highly sensitive and impressionable. The local neurosis is an expression of an impaired, disordered, highly developed nervous system. As a want of general development predisposes to this neurotic habit, so do imperfect sexual developments. To repeat: there is, then, such a condition as obstructive dysmenorrhœa.

It is, however, comparatively rare. Many obstructions are seeming and not real. Pain is developed by the local influx to and within an organ the seat of a neurosis, either purely local or a local expression of a general nervous disorder, very generally antedating any organic lesion, and almost always aggravated by such as become acquired.

Concerning treatment, but a few points were touched upon. In all cases of painful menstruation in young, unmarried women, treatment should be purely constitutional, at least for a time, until the necessity for a local exploration is clearly and justifiably apparent. If there is a sin in the profession, it is the unnecessarily frequent and unwarranted liberty assumed on the part of many practitioners, women as well as men, that, because a young female suffers pain at the menstrual period, she must have some local uterine disease, and is a fit subject for local treatment. In thousands of instances all over the country is this injustice being done young women, an injury which must reflect itself back on the profession. At this age and social condition there is, excepting it may be some congenital abnormity, seldom any local disease, or one so trifling and insignificant as to require no local treatment. Local treatment may be needed, fortunately, rarely, and only, after a failure following a general treatment, thoroughly and fairly tested.

During the interval, every attention should be directed towards an improvement of the general health by hygiene, proper diet, dress, and exercise.

Iron and arsenic—each has its indications according to conduct of menstrual flux in quantity, duration, and frequency. Galvanism of the hypogastric plexus and of the spinal centre occasionally accomplishes great good. Failures are also experienced. It is a remedy indicated only in the purely neurotic, spasmodic, or rheumatic forms of the disease.

The author has experienced decided benefit, in some cases, from a prolonged administration of mercuric bichloride and potassic iodide, in small doses, three times a day—results not owing to the relief of any syphilitic complication, or the melting down of any periuterine inflammatory infiltration. The only lesion was a chronic endometritis, and the menstrual pain seemed to be spasmodic.

The author also expressed confidence in the efficacy of the concentrated tincture of cimicifuga and tincture of pulsatilla, given during the attack. He condemned, in strong language, the frequent and uncalled-for administration of opiates, especially morphia hypodermically, which never cure the disease, but which tend to induce a condition of the nervous system more difficult to overcome than the original affection.

Dilatation by sound and bougies did good in stubborn cases, not by securing a larger canal, but by blunting the sensibility of the uterus, and by stretching the irritable fibres of the internal sphincter.

Believing that stenosis is more frequent at the external os than at the internal, it can be understood how, on this ground, sterility is also more frequent and peristent than dysmenorrhœa. It is easier for the menstrual discharge to get out than it is for the spermatic fluid to obtain entrance. Although stenosis may not be a direct factor in the production of dysmenorrhœa, it is, nevertheless, a potent one in creating disease of the uterus — dilatation of the upper cavity, thickening and softening, and granular degeneration of the endometrium, and consequent stubborn catarrh. The uterine walls, likewise, in time, undergo hyperplastic changes. Incision here is preferable to dilatation—an operation which doubtless has been greatly overdone; still, it has stood the test of time. Time has fixed its proper field of utility. With proper restrictions, its dangers are slight and results good. Very little can be added to our knowledge of the *technique* of the operation given us by Simpson, Sims, and Emmet, although Fritsch has proposed some ingenious methods, as applied to the methods of obviating the various forms of stenosis of the external os.

Dr. Chadwick, of Boston, agreed very much with what had been said. For some years he had entirely given up the theory of obstruction, and never used incisions, except those confined to the external os. Some of the causes of dysmenorrhæa, he regarded as purely local, others were constitutional, as, for example, in neurotic cases. These must be treated on a nervous basis. He uses for a week beforehand the bromides, in ten to twenty grain doses, producing some blunting of the sensibilities. During menstruation he used cocoa and carbonate of ammonia, never morphia. He had no faith in dysmenorrhœa being due to flexion, though he knew it might occur as a coincidence.

Dr. Barker, of New York, shared the opinion of the author that obstructive cases constitute but a small proportion of the whole, though they do occur. He thought there were two sorts of pain, one uterine, the other ovarian. For tonic treatment, his preference was for the lactate of iron, which he generally associated with chlorate of potash. He had got very good results from the use of apiol. The way to secure these is to commence its use at least two days before the menstrual period. He gave it in capsules after each meal, and continues it through the menstrual period. In cases where there is ovarian excitement, as manifested by the signs already mentioned, without the relief of a discharge from the uterus, he uses the bromide of sodium in ten to fifteen grain doses. He prefers this to bromide of potash, because he thinks it less likely to cause bromide eruption, which is a matter of great consequence to young ladies. He also arranges the doses so that they shall be taken in the middle of the forenoon, and in the middle of the afternoon, and the last dose just before going to bed, so that the patient does not have the stupefying effects during the day.

Wednesday, September 19th, Second Day.

Morning Session.

The meeting was opened by the reading of *The President's Address* by Dr. Gilman Kimball, of Lowell, Mass., entitled

A BIOGRAPHICAL SKETCH OF DR. NATHAN SMITH, FOUNDER OF THE DARTMOUTH MEDICAL COLLEGE.

In opening his address he said: Although it has been the custom with those who have filled the position which I now occupy, to devote the hour to the consideration of some subject pertaining to the department of gynecology, I propose to deviate from that rule and devote this, which seems a fitting opportunity of paying a just tribute to one who, by the course of his genius, by his indomitable will and unflagging energy, has done more to advance the practice of medicine and surgery than any other single individual in our country. I refer to Dr. Nathan Smith, the founder of Dartmouth Medical College.

In regard to ovariotomy, he is said to have been the second to perform it successfully, which he did in July, 1821. The operation of Dr. Smith was truly original, and except that McDowell's operation was performed nine years previously, the two operations stand alike. McDowell has been termed the father of ovariotomy, and it is not my purpose to raise any question as to the justice of this claim, but while I do complete justice to McDowell, is there nothing more to be said of Dr. Smith than that he had the courage to follow in the footsteps of McDowell? Dr. Smith performed the operation without any knowledge of the previous operation of McDowell, and should therefore receive equal credit.

Dr. Smith was born in September, 1762. His early life was spent in Chester, Vermont, where his father followed the occupation of farming. He received what education he could obtain from the district school during the winter. At times he himself taught in the school. He was led to study medicine by witnessing an operation. He desired to begin the study at once, but was advised to first perfect his general education. He began the practice of medicine in the town of Cornish, N. H., when he was thirty-five years of age. At the end of two years, he resumed his medical studies at Harvard College, from which institution he received the degree of M.D. He then returned to Cornish, and continued to practice for six years.

The difficulty of procuring a medical education in New England was so great that he decided to give instruction, and in order to fit himself for this work, he went to Europe to perfect himself. Before starting, he proposed to the authorities of Dartmouth College that they should organize a medical department. His proposition met with favor. He returned in September, 1797, and delivered his first course of lectures during the ensuing fall. In the following August, he was elected Professor of Anatomy, Surgery, Chemistry, and the Theory and Practice of Physic.

In 1812, Yale College decided to establish a medical department, and called upon Dr. Smith to take the position of Professor of the Theory and Practice of Surgery. He began his lectures in this institution in 1813, when fifty-one years of age. In 1816, he was reëlected a professor in the Dartmouth College, but declined to accept, and, in 1817, removed his family to New Haven. In 1821, he went to Boston, and remained there five years. During the last thirty-two years of his life, Dr. Smith gave instruction in about one hundred and thirty-eight special courses. This work began to tell on him, and, while in possession of full mental power, he died on the 28th of August, 1829.

The speaker then referred to the manner in which Dr. Smith had filled the various positions of life, illustrating his remarks by several anecdotes. Dr. Kimball again alluded to Dr. Smith's performance of the operation of ovariotomy, and claimed that Dr. Smith was entitled to the same honors as had been bestowed on McDowell.

DR. S. D. GROSS said that he had thought that Dr. Smith had performed his operation with the knowledge that it had been previously performed by McDowell; his operation having been done thirteen years after that of the latter gentleman, who had operated in 1809. An account of the operation was published in a Philadelphia journal in 1816. Dr. Gross thought that it was very unlikely that Dr. Smith failed to see it. He thought that Dr. Kimball had omitted to refer to the greatest of all Dr. Smith's achievements—he referred to the creation of Dr. Nathan R. Smith, of Baltimore.

DR. KIMBALL.—It will, I think, be in order for me to make a few remarks in reference to the statement of Dr. Gross. It should be remembered that intercourse between the east and west was at this time very difficult. Matters which had occurred in one part might not be known for a long time in the other. In a discussion with Dr. Reuben D. Mussey, who was Dr. Smith's successor in teaching surgery at Dartmouth, I received a detailed account of this operation of Dr. Smith. I fully believe that he knew nothing of McDowell's case.

DR. THADDEUS A. REAMY, of Cincinnati, then read a paper entitled

A RARE FORM OF ABDOMINAL TUMOR.

He described three cases, the first of which was seen by him in July, 1873. The patient was thirty-eight years of age, had been married fifteen years, and was sterile. She had enjoyed good health until three years previously. At this time she discovered an abdominal tumor, just below and to the right of the umbilicus. This tumor had enlarged gradually until it reached the size of the uterus at the eighth month of pregnancy. The woman had always menstruated regularly. She had menstruated two weeks before examination. She appeared well nourished, but there was a little change of the complexion as in the incipiency of the cancerous cachexia. An examination of the patient in the erect position showed the form of the enlargement to be striking. There was bulging in the median line from two inches above the umbilicus nearly to the pubes. The lateral borders could almost be determined by the eye alone. The abdominal wall was comparatively thin. The surface of the tumor was irregular and lobulated. There was fluctuation at every point. At some points the tumor was more tense than at others. This was probably due to difference in the thickness of the cyst-walls. This thickening was especially marked at about the umbilicus. The tumor could be moved a little from side to side, and to a limited extent upwards and downwards. There was intestinal resonance in both iliac fossæ; the bladder was empty. Digital examination per vaginam revealed a normal vagina and cervix. The cervix was slightly anteverted in agreement with a slight retroversion of the uterus. The os was somewhat patulous. The sound gave the measurement of scant three inches. There was no bulging into the vagina. There was no pain or tenderness on pressure.

Supposing it to be of uterine or ovarian origin, Dr. Reamy decided to tap, and he introduced a trocar in the median line, about four inches below the umbilicus. The fluid gushed out with such force as to fall at least two feet from the patient. It had the appearance of blood. The quantity obtained was six quarts.

The fluid was examined microscopically, and was found to contain red and white corpuscles. The size of the abdomen was reduced one-half by the tapping. No inflammatory complication followed. A letter just received states that the enlargement remains about the same.

The second case was seen June 4, 1881. The patient was a widow, fifty-eight years of age, and the mother of five children. Her husband died six years previously of cancer of the stomach. Two years before, an abdominal enlargement was discovered. The patient had noticed it first as a small lump below and to the left of the umbilicus. In two years it had reached the size of the fifth month of gestation. Her general health was good, and the menopause passed. A few days before the family physician was called, she had colicky pains, which were relieved by some domestic remedies. Some tenderness of the abdomen remained. A physician was sent for, the tenderness was relieved, and the case passed from observation until the time when Dr. Reamy was called. The patient was taken sick at midnight, with violent abdominal pain, attended with vomiting of mucus colored with bile. The pain was intense, and continued notwithstanding the free use of anodynes. The abdominal enlargement had increased, since the patient had been last seen, to the size of the uterus at the eighth month. It had remained at this size for one year. The general health had been fair. There was no cachexia. Occasional abdominal pains had been experienced. The patient had a temperature of 103°, and a pulse of 120. The abdomen was very tender. It was clear that the patient was suffering from peritonitis, and it was thought that this might have some connection with the tumor. Opiates were freely administered, and Dr. Reamy was called in consultation the next morning. The temperature was then

100°, and the pulse 130. The woman was delirious. Physical examination revealed marked dulness from above the umbilicus to the pubes, and resonance in each iliac fossa. Fluctuation could be clearly made out. Vaginal examination showed that the vagina and uterus were normal, and that there was no bulging downwards. The diagnosis of general peritonitis was clear enough, but its relation to the tumor was not so clear, although such relation was believed to exist. It was thought possible that the cyst had ruptured, and that part of its contents had entered the peritoneal cavity. It was, however, clear that the amount of escaped fluid could not be great. The tearing of adhesions was thought of, but not seriously considered. The rupture of omental or other bloodvessels was thought of as probable.

As there was such severe peritonitis the performance of any operation was not considered proper. It was decided to increase the amount of opiates, administer stimulants, apply ice poultices, and await further developments. This, Dr. Reamy thought, was a blunder. The abdominal cavity should have been opened. This would have afforded the woman a chance, for, although the tumor proved to be a sarcoma, he could see no reason why it could not have been successfully removed. The patient died soon after.

At the post-mortem, a tumor somewhat pyriform in shape was found. The walls of the cyst were thick at the upper and thin at the lower part. Notwithstanding that the removal of the tumor was done with great care, it gave way, and a portion of its contents escaped into the abdominal cavity. The fluid seemed to be almost entirely blood. There must have been at least two and a half gallons. The tumor appeared to be composed of connective tissue and bloodvessels; there was no connection with the uterus or ovaries. The point of origin must have been the omentum, and, indeed, the greater omentum had entirely disappeared. There were no adhesions to the abdominal walls or organs. Microscopical examination showed that the fluid contained a large number of blood-corpuscles, some of which were normal, but many were broken down. The fluid was colored red by the coloring matter of the blood. There was also a considerable amount of granular detritus. The semi-solid matter which was found presented the appearance of blood-clots.

The third case was seen in November, 1882. The patient was a married woman, fifty-two years of age, and the mother of eleven children, the youngest being ten years old. Menstruation had been regular until three years before, when it stopped suddenly. Five years ago, she noticed enlargement of the abdomen. It was first found below and to the left of the umbilicus. It could be moved slightly from side to side, and was not tender, even on deep pressure. Two years before, she had an attack of pain in the region of the growth, which seemed to have been paroxysmal. This lasted for a day, and was followed by soreness which continued for several days. The tumor then grew more rapidly, and in the next six months reached the size of about an eight month's pregnancy. It then ceased growing and remained stationary until about one week before the patient came under observation. There was then a repetition of the attacks of pain. During the past six months she had lost weight, and her complexion was decidedly sallow. Later she suffered from peritonitis, believed to be due to changes in the tumor. The attack had been ushered in with soreness over the abdomen, and followed by some tympanites.

On examining her, Dr. Reamy found, extending from the umbilicus to the lower portion of the abdomen, a tumor which was spread out like an apron in front of the intestines. The surface of the growth was irregular and lobulated; there was fluctuation; the intestinal resonance was well marked in the iliac fossæ. Examination showed the vagina and cervix to be normal. The sound was not passed.

Impressed with the striking resemblance in history and the results of the physical examination between this case and the two which he had mentioned, he advised tapping, which drew off five quarts of fluid presenting the characters of blood. Microscopical examination of the fluid showed that it had the same characters as that removed from the other cases. After the removal of the fluid, the cyst collapsed, except at a point between the left iliac fossa and the middle line. At this point fulness and fluctuation remained. Thirteen days later, fluctuation having become more marked, he again aspirated, removing sixteen ounces of pus. The patient made a tedious but complete recovery.

He saw this woman last week, and she now looks stout and healthy. She has gained twenty pounds above her ordinary weight.

The foregoing cases seem so much alike that he felt justified in grouping them together. They are sufficiently rare to warrant him in believing that a report of them would not be without interest. He then referred to a number of cases, somewhat resembling those described, which he had found in looking up the literature of the subject.

It is a matter of clinical interest that the first and third cases, which were tapped, recovered, while the second case, which was not tapped, died, and the post-mortem revealed a sarcoma. This raises the question whether these other cases would have become sarcomatous if not tapped, or whether it could be possible that this one had degenerated into a sarcoma. It is possible that these women may yet die of sarcoma.

He then presented the specimens removed from the second patient, and read the report of the post-mortem. The walls of the tumor varied in thickness from that of tissue-paper to a thickness of three inches. The cyst had evidently existed for some time, as some of the following conditions will show. It had formed between the layers of the omentum. The outer lining membrane of the cyst was very thin and friable; closely attached to it were numerous masses of fibres. The wall of the large cyst contained a number of tumors which varied in size from a hickory nut to a hen's egg. Under the microscope these tumors presented different appearances. Around all of the tumors was an evident capsule. There was no broken-down centre in them, though a few hemorrhagic foci were found scattered through them. These tumors were not very vascular, but, wherever a vessel was found, its walls were infiltrated with spindle-cells. Some of them were found to consist of spindle-cells, with large nuclei and very little intercellular substance. Others were smaller and presented a chocolate or brown appearance, and under the microscope resembled cavernous tissue. These were extremely vascular. Here and there were found large hemorrhagic foci. The vessels had been so infiltrated with round and spindle-cells that their tissue had been destroyed. They appeared merely as channels through the growth. In the vascular tumors the round cells predominated.

From the specimen it would appear that it was a cyst which had developed in the omentum; that in the walls of this cyst numerous sarcomatous tumors had developed. One of these tumors had ruptured into the cyst, and there had been recurring hemorrhage which had produced rupture of the main cyst into the peritoneal cavity causing peritonitis from which the patient died.

DR. CHARLES C. LEE, of New York, concurred in the statement that these tumors of the omentum were very rare, and thought that if tapping were more generally resorted to, our knowledge of them would be advanced.

DR. R. S. SUTTON, of Pittsburg, spoke of the rarity of the tumors and said that he had seen two or three in the practice of foreign operators. He claimed that it was not possible before the abdomen was opened to say whether a tumor was carcinoma or sarcoma of the omentum. It is generally possible to determine that the tumor is in all probability in the omentum, by exclusion, showing that the tumor is not connected with any of the other abdominal organs. If there were fluctuation, whether distinct or indistinct, he considered it a very dangerous practice to plunge a trocar or even an aspirator into the growth. If the surgeon thinks that before he is justified in opening the belly, he must have some of the fluid for microscopical examination, the hypodermic syringe will remove all that is necessary. He also believed that in such cases the surgeon was justified in discarding, not only the aspirator and trocar, but also the hypodermic needle, and making an exploratory opening of the belly. When the abdomen is opened it is possible to determine the location and attachments of the growth and the possibility of its removal; but the exact pathological character of the growth cannot be determined until after removal. If the tumor be sarcoma or carcinoma, there is little hope of prolonging the life of the patient. Sarcoma is as malignant as carcinoma. While carcinoma travels by the absorbents, sarcoma travels through the bloodvessels, so that sarcoma will lead more surely to general infection than will carcinoma. In the latter the liability to return depends upon the character of the sarcoma. The giant-cell variety is by no means so likely to return as the spindle-cell variety. The round-celled and the mixed variety return almost as certainly as the sun after night.

Does sarcoma ever pass into carcinoma, or does a benign growth ever degenerate into sarcoma? In regard to the first proposition, sarcoma never changes into carcinoma. The growth is either one or the other *ab initio*. Of the cases which he had observed, one was in the practice of Hancock, of London. A large carcinoma was removed, but the patient soon died. The remaining two cases were in the practice of Billroth. In one, after the nature of the growth was determined, the abdomen was closed; in the other case the operation was performed. He believed that when the exploratory incision shows that the tumor is malignant, that the abdomen should be closed and the tumor not interfered with.

DR. HENRY F. CAMPBELL, of Georgia, considered the cases of great interest. He thought that it was certainly worth the risk to remove tumors of the omentum if there were no extensive adhesions, and the exploratory incision had been made.

DR. REAMY said: I shall only reply to one or two points. I cannot quite consent to the doctrine which Dr. Sutton advocates, especially in the sweeping way in which he makes it. I understand him to say that it would be more judicious to open the abdominal cavity and examine the tumor than to use the aspirator. I freely agree with the recommendation that it is better to use the hypodermic needle, if it is desired to obtain the fluid for microscopical examination. But that is not all that we want; where we have a tumor lying in contact with the abdominal wall, where evidence is against its being connected with the ovaries or uterus, and in favor of its connection with the omentum, and where there is fluctuation, it seems to me that in such a case it is justifiable to operate for the relief of the symptoms.

Let me also call attention to the fact that the two patients who were tapped recovered. The first case had some emaciation; the second case had marked emaciation and pronounced cachexia. One of these cases occurred several years ago, and the other several months ago. There is a second point in this connection. It is that we know from pathology that sarcoma invades the system through the bloodvessels and carcinoma through the absorbents. At the same time, it is a curious fact that in the second patient, where the tumor was proven to be sarcomatous, no cachexia was present. The other two cases could not have been due to sarcoma, because they recovered.

The next paper was by DR. HENRY F. CAMPBELL, of Georgia, and was entitled

CONGENITAL FISSURE OF THE FEMALE URETHRA, WITH EXSTROPHY OF THE BLADDER.

After making some general remarks upon abnormalities of the genital organs, and the failure of operations in most cases, he described the following case, which occurred in a little girl, two years old, brought to him by Dr. R. The parents of the child noticed something wrong about the vulva of the child, and called Dr. R.'s attention to it. On examining the patient, he found a red tumor, about the size of a strawberry, at the upper part of the vulva, in the situation of the meatus, and apparently obstructing the passage of the urine. The tumor was very vascular, and evidently constricted, as was shown by its purplish hue. The doctor thought of removing it by a ligature, but, before doing so, resolved to consult Dr. Campbell in regard to it. He saw the case in July, 1880. The tumor presented the appearance above described; but the appearance of the swelling led him to believe that it was composed of the wall of the bladder, and on pressing it, it slipped back, at first slowly and finally suddenly, into the bladder. There was a gush of urine at the moment, but not to any great amount. The upper wall of the urethra presented a flattened appearance, but very little trace of a lateral border, indicating the presence of a cleft. The hymen was perfect, and the posterior commissure and the other parts of the vulva were normal. Careful examination of the symphysis showed that the pubic bones were fully developed.

The whole interest which attaches to this case, beside the rarity of the occurrence, is as regards the proper time to operate. The child is now four years old. There is hardly enough tissue to allow of the necessary paring and bringing together of the parts. He thought that it would be more advisable to operate after puberty, and in the mean time to use such apparatus as will afford the most comfort to the patient.

DR. B. B. BROWNE, of Baltimore, described a somewhat similar case, in which the child died before operation.

DR. M. D. MANN, of Buffalo, related a case which, while not being of the same class of cases as Dr. Campbell's, might throw some light on the point as to the proper time to operate. He had brought to him a girl who had fallen on a broken chair, and produced a laceration of the perineum through the sphincter. He advised an immediate operation. This was performed, and the result was a perfect cure.

DR. CAMPBELL, in concluding, said that his case was an exaggerated hypospadias, and that he thought that the chances of success would be increased by postponing the operation until puberty.

The next paper was by DR. THOMAS ADDIS EMMET, of New York, and was entitled

A STUDY OF THE ETIOLOGY OF PERINEAL LACERATION, WITH A NEW METHOD FOR ITS PROPER REPAIR.

He referred to the fact that for a number of years he had devoted more attention to the subject of laceration of the perineum than to any other in the whole range of gynecology. It has not been generally recognized that the suffering from lacerated perineum was not in proportion to the extent of the lesion. All have seen cases of severe laceration of the perineum, unaccompanied by symptoms. On the other hand, marked symptoms have followed apparently trivial lacerations. Various modifications of Baker Brown's operation have been employed since he first united the lacerated surfaces, but none of them have done more than relieve the discomfort resulting from the want of unity.

He then described the attachments of the pelvic fascia, and pointed out that the parts above are supported by this fascia. He then referred to a paper which he had presented at the last meeting, describing a transverse laceration of the urethra produced by digital dilatation; the laceration occurred at the sigmoid portion of the urethra where it is surrounded by the pelvic fascia. When the finger reaches this point, the fascia must be put on the stretch or carried forward in front of the finger, and transverse laceration is produced. In a similar way, the head of the child separates the pelvic fascia from the vagina.

In the usual operation for lacerated perineum, it is customary to denude a large part of the surface of the lips on each side. I have seen the denudation carried almost to the level of the urethra. These operations often interfere with sexual intercourse, and if pregnancy occurs, the results of the operation are destroyed. The pain suffered by such an operation is severe.

It is about twelve years since I began to dispose of a rectocele by bringing it up behind the laceration. Observation has shown me that the chief support is obtained in this way. Three years ago I had the opportunity to operate in a case of subinvolution of the vagina. This occurred in a woman aged 35 years. She had had two children. Since the last labor, which occurred a number of years previously, she had suffered from great relaxation of the vagina. There was no rectocele, and no appreciable laceration of the perineum. It seemed as if the running string of the mouth of the bag had been lost. I determined to unite the posterior wall of the vagina, and bring it up behind the perineum at about the former seat of the hymen. The line ran as a crescentic fold across the vagina, and the horns were lost in the sulcus on each side. The dilated vagina was reduced to the size of the vagina in a married woman who has not borne children. After the operation, the line of sutures was entirely within the vagina and out of sight. On passing the finger within the vagina, it was found that the tissues forming the perineum had been drawn up to the pubes.

When the laceration extends to the anus, it is necessary to modify the operation, although the principle is the same. In performing the operation a tenaculum is introduced into each lip at the position of the carunculæ, a third tenaculum catching the posterior wall of the vagina, and these three points are brought together. Traction draws the labial surface upwards and inwards, and reduces the size of the entrance of the vagina. When this procedure is carried out, it is surprising to what an extent the laceration is reduced. Sutures are introduced through the labial surfaces, and a central fold is drawn up to the posterior wall of the vagina. The sutures are first introduced at the angles of the crescentic fold, and alternately on each side. Usually only two or three sutures are required. The most common mistake in performing this operation is made in taking up too much of the posterior wall, the sutures cutting out. In conclusion he gave the following *résumé* of his paper.

Laceration of the perineum does not produce the troubles attributed to it. It is not lacerated as it seems to be. After the laceration, the tissue in front of the rectum may be thicker than it was before the injury.

There is no such body as that which has been termed the perineal body, as has heretofore been taught, and which operators endeavor to build up. This can be proven by any one who puts one finger in the rectum and another in the vagina. He will then find that there is no thick tissue between the fingers.

I hold that even if the lacerated perineum is not restored, you can leave it entirely out of the question, if the posterior wall of the vagina is in contact with the entrance of the vagina where it joins the soft parts.

I hold that we may exclude everything in regard to the external organs of generation, outside of where the hymen runs around the vagina. All sewing together of the outside tissues is a waste of time and structure.

The fascia forming the sulcus on each side of the vagina is all-important in keeping up the perineum and posterior wall of the vagina. It acts just as a pair of suspenders does in keeping up the pantaloons. By bringing a crescentic fold across the vagina, we restore the attachment of the fascia. The perineal trouble can be left entirely out of the question. If the tissues are brought together as I have described, the perineal lesion will be found to be very superficial. The symptom which we attribute to lacerated perineum may be relieved by the operation I have referred to.

Its advantages are that it produces less disturbance of the parts; there is no comparison as to the comfort to the patient between this and the former operation, and the operation is so simple that it may be performed by many men who cannot perform the old operation.

I want to call particular attention to the *rôle* which the fascia plays in supporting these parts, and to the fact that the perineum has little or nothing to do with producing the symptoms complained of.

AFTERNOON SESSION.

The afternoon session began with a discussion of the paper read by Dr. Emmet.

DR. THADDEUS A. REAMY, of Cincinnati, said that he would like to ask Dr. Emmet if he had not seen cases where the only tissue separated was the posterior commissure up to the entrance of the vagina. This injury is purely confined to those parts which Dr. Emmet claims are of no importance. He had another inquiry in regard to the operation. If he understood him rightly Dr. Emmet proposed to leave a surface inside, which was undenuded, which is to be covered over, leaving a cavity. When he described this it reminded him very forcibly of Dr. Sims' operation for cystocele, in which two points on the anterior vaginal wall below the os were denuded, and brought together. This operation was afterwards modified by the distinguished author of the paper just read. The modification consisted in carrying the line of denudation entirely across the vagina, for it was found that in the old operation the cervix settled into the pocket that had been left. It is also a better operation, for the reason that it leaves no cicatrix, but solid, firm union. It seemed to him that if the new operation for lacerated perineum were the better one, that it could be improved by denuding the entire surface.

He supposed that it was customary with every operator where there is great redundancy and prolapse of the posterior wall of the vagina, to close this first and subsequently operate on the perineum; and that everyone has found that in cases where the sphincter is not divided, the same results can be accomplished by taking out the redundant tissue in the posterior wall and including all in one operation.

He thought that the operation which had been described was an admirable one for a particular class of cases, but the number of these cases, he believed, was limited. He did not think that it was a substitute for the operation for lacerated perineum.

Dr. Frank P. Foster, of New York, said: I think I understand Dr. Emmet to say that the restoration of what is called the perineal body does not contribute to the rectification of the troubles which are complained of. Such being the case, although it is with some hesitation that I do it, I wish to put myself on record as being even more radical. I deny that the perineum has anything whatever to with supporting the uterus under normal circumstances. I think that this doctrine has nothing to recommend it but plausability. I do not think that there is an instance in human anatomy of an organ resting upon anything beneath it. The brain does not rest on the base of the skull, for if the base is removed the brain still remains in contact with the vault of the skull. The heart and lungs do not rest on the diaphragm. The liver rests upon nothing, but is supported from above. The womb does not rest on the perineum any more than it does on the woman's hand. If a healthy woman is examined in the standing position, and the perineal structure is depressed as much as possible, neither the uterus nor the anterior vaginal wall is affected by it. None of the structures that enter into the roof of the pelvis will follow the finger. What the perineum will do, and what it often does, is to sustain a uterus which has lost its normal support from above. The perineum has no sustentative function, but it does not, therefore, follow that the perineum has no function. It serves as a *point d'appui* for a number of muscles.

Dr. R. S. Sutton, of Pittsburg, hoped that he misunderstood Dr. Emmet in saying that no such body as the perineal body exists. He could not believe that he meant to say that there is no such body as the lozenge-shaped body which exists between the rectum and vagina. In frozen sections it is seen to consist largely of connective tissue and muscular fibre. We have been taught that when the perineum is lacerated, the transverse perinei muscles draw the two lips asunder. That is correct, and so long as anatomy stands, we cannot get away from that fact. Dr. Emmet had said that the tissues in front of the rectum are thicker after than before a laceration. He could conceive how the thickness might be greater from the presence of an enormous rectocele, but if there is no rectocele, it is anatomically impossible that the thickness can be greater. It has also been said that the symptoms attributed to the lesion do not necessarily follow it. Dr. Gaillard Thomas has said that a woman had better break her leg than rupture her perineum, and he did not know but that he was about right. He admitted that in many cases symptoms requiring surgical aid do not occur. There are cases of cystocele, of rectocele, and of prolapse of the vaginal walls dragging the uterus down, which have been always attributed to laceration of the perineum, and which as a rule are found only in women who have sustained laceration. Again, when the outlet of the vagina is broken, the vagina becomes a receptacle for atmospheric air, so that when the patient stoops, the air is forced out of the vagina. Such women exhibit a train of nervous symptoms which disappear after the operation.

It has been said that the uterus is not supported by the perineum, or the broad ligament, or the round ligament; and now, if we prove that the peritoneum does not support it, we shall soon be able to show that the uterus is in mid-air, and not supported by anything. It is supported by every thing surrounding it.

If the perineum is of no importance, why is it that laceration of it is followed by cervical catarrh, vaginal catarrh, relaxation of the vaginal walls, and a train of nervous symptoms which are clearly attributable to it? Why is it that in women with partial laceration you almost constantly find anal fissure? In this class of women anal fissure and hemorrhoids occur seven times more frequently than in women who have no laceration.

In reference to the operation just proposed, he can see very clearly how, where the laceration has been limited to the superficial tissues, that it will restore the parts; when the laceration has extended through the perineal centre he cannot believe it. Dr. Sutton then closed by referring to the similarity between this operation and that of Hegar.

Dr. Emmet then closed the discussion. He stated that he did not deny the existence of the perineum, but he did deny that there existed any such body as the perineal body. Everything in the pelvis is supported by fascia. He thought that when the members have had an opportunity of reading his paper that they would not see so much to object to in his plan of operation as they now do.

Dr. Charles Carroll Lee, of New York, then read a paper on

THE MANAGEMENT OF ACCIDENTAL PUNCTURE AND OTHER INJURIES OF THE GRAVID UTERUS AS A COMPLICATION OF LAPAROTOMY,

in which he gave the details of seven cases of this rare complication, including one that had occurred in his hospital practice. These are all that are known to him in medical literature. From them he drew the following conclusions:

1. The pregnant uterus may be punctured or otherwise wounded during abdominal operations without necessarily causing abortion.

2. Both from *a priori* and clinical evidence, abortion in such cases seems to depend on injury of the uterine contents, not of the womb itself, however severe.

3. If the former has certainly occurred, Cæsarean section is indicated, and should be done at once. In this case, the utmost care must be taken to secure thorough subsequent drainage from the uterine cavity.

4. If the uterine walls alone are injured, the wound is to be treated on general principles. If a deep puncture or incision, it must be sutured with the minutest care, with exact coaptation of the edges. For this purpose, fine silk sutures, rendered antiseptic, are the best. If a nick or superficial puncture, it must not be ligated, for ligatures cut quickly through uterine tissue; if too small to be sutured, the bleeding points must be lightly touched with the thermo-cautery until all oozing has ceased.

Good surgery and the dictates of humanity alike demand that in such circumstances a chance of survival be given the child as well as the mother.

Dr. H. P. C. Wilson, of Baltimore, said: I have had some little experience in the closing of wounds of the uterus in laparotomy during pregnancy. Last fall, I performed ovariotomy in a woman four months advanced in pregnancy. The condition was made out before the operation was attempted. On opening the abdomen, it was found that the ovarian tumor had a strong attachment to the uterus. It was found necessary to transfix this adhesion, and tie it in two sections. There were a number of other adhesions to the uterus, the separation of which caused considerable oozing. This was checked by the use of Monsel's solution. The tumor was removed, the pedicle touched with the iron salt, and the abdominal incision closed. This woman did exceptionally well. In two weeks she was sitting up. She then began to have pains in the abdomen, fever and chills. These increased in severity. At the end of a week or ten days, I felt a hard knot in the abdomen, and I was at first disposed to think that I had overlooked a second ovarian tumor; but I finally concluded that there must be a deep-seated abscess. I was considering whether or not to introduce an exploring needle, when the woman miscarried. This was about three weeks after the operation. The abscess broke at the same time, discharging a large quantity of pus. This abscess gave a great deal of trouble, filling and refilling. It was finally cured by applications of iodine. The patient recovered.

DR. GARRIGUES, of New York, had seen the case described by Dr. Lee, and made some remarks confirming and explaining what Dr. Lee had said.

DR. BYFORD, of Chicago, desired to express his opinion upon some points connected with this subject. First, as to the point of avoiding the danger connected with the operation of ovariotomy, of wounding the uterus. It seems from Dr. Lee's paper that in all cases in which the uterus was wounded, except his own, that pregnancy was suspected, and that consequently there must have been some defect in his examination. In the case which he had, he did not make a thorough examination; he was deterred from making it by the statements that the patient was entirely above suspicion, and he felt that it was not right to subject her to the examination.

The second point is as to our rule of action when the accident has happened. Before hearing this paper, he had concluded that it would always be proper, when the uterus had been wounded, to open the organ and remove its contents. From Dr. Lee's case, he must conclude that an exception to this rule would be favorable. He has reported a case where the contents of the uterus were not removed, and the wound of the uterus was sewed up. In this case pregnancy had probably not advanced beyond three months. At that time the fibres of the organ are not so soft, and they do not tend so strongly to draw open the wound, as at a later period. He thought that if pregnancy had advanced to seven or eight months, that the stitches would not hold. In his own case the wound in the uterus made by the trocar was about the size of his finger. In ten minutes, it was as large as a silver dollar. The traction of the muscular fibres was so strong that he felt convinced that stitches would have been torn out. The plan recommended by Dr. Lee might be used in the early stages of pregnancy; but when the uterus is sufficiently large to cause the kind of traction spoken of, he should be inclined to remove the contents of the organ, even if the wound had not involved its whole thickness.

Another point of the paper seems to be, that in all cases in which the wound was sewed up, the patients recovered, while in all the cases in which it was not closed the patient died. He thought the rule ought to be as he before stated.

DR. LEE said, I have but a few words to add. In regard to Dr. Wilson's case, it does not properly come under the class of cases embraced in this discussion. It was a case in which miscarriage occurred from contiguous inflammation. I should not recommend the application of iron styptics in the pelvic cavity; I think that the thermo-cautery is much safer. I am not disposed to take issue with Dr. Byford in regard to the treatment of wounds of the uterus at early and late periods of pregnancy. It is very probable that at a late period the uterus could not be safely repaired by sutures. One important point in Dr. Byford's case was that the child was viable.

DR. A. REEVES JACKSON, of Chicago, then read a paper entitled,

IS EXTIRPATION OF THE CANCEROUS UTERUS A JUSTIFIABLE OPERATION?

In medical and surgical practice the results obtained from any means or method of treatment are proper tests by which their value may be judged. And, in accordance with this principle, whenever any therapeutic agent has been found, after adequate trial, to generally fail in effecting the purpose of its use, or to be habitually dangerous to health or life, candid and honest men have ceased to employ it.

During the past few years there has been a rapidly growing tendency to a bold, fearless—may I not say reckless?—progressiveness in the surgical branches of our profession that would have appalled our predecessors. When we consider that some of these achievements are scarcely more than ante-mortem examinations, whose chief usefulness consists in demonstrating how long their owners are able to survive the loss of certain bodily organs, we may properly ask whether there is to be any limit to these exhibitions of surgical temerity.

I propose to discuss this question: In view of known facts, is it justifiable to extirpate the uterus for carcinomatous disease?

It is notorious that in almost all instances in which surgical operations have been done for the removal of cancers, they have only been of temporary benefit—if beneficial at all. Nevertheless, so long as these procedures were comparatively free from danger to life; so long as they did no actual harm, they were doubtless proper in many cases, because they added for a time to the patient's comfort. They rarely did more than this. But when the operations themselves become so dangerous as to destroy 70 per cent. of lives within a few hours, or a few days; and when, of the few who escape the operation, 50 to 75 per cent. die from recurrence of the disease within a few months; and when, further, of those who yet remain all, or nearly all, die as soon as though no operation had been performed, we should halt to consider whether our calling, thus exercised, is beneficial or injurious.

The removal of the whole uterus is not a very novel operation. Andreas A. Cruce removed the organ, per vaginam, for scirrhus in 1560; and similar operations were done by Wrisburg, and by Monteggia at the end of the eighteenth century. Blundell operated in three cases in 1828, two of the patients dying, and one surviving a year, and finally dying from a recurrence of the disease.

In 1878 Prof. W. A. Freund reported a new method, under antiseptic precautions, whereby the uterus could be, as he thought, more safely removed than hitherto. In the early part of 1879 he had operated in ten cases, with the result of five deaths and five recoveries, and in September of that year, at the International Medical Congress, at Amsterdam, he reported four additional cases of his own. In one of these the operation was unfinished; the other three were all fatal. Paggia (*Giornale Internazionale delle Scienze Med.*, fas. 3, 4, 1883) furnishes the latest table of operations by Freund's method. It includes 91 cases; 66 died; 25 recovered; mortality 72.5 per cent. Yet at the London Congress, Freund made the astounding statement that the operation may be undertaken as a not very dangerous one in the early stages of carcinoma and sarcoma, in which it gives promise of a radical cure!

In consequence of the frightful mortality following the abdominal method, Czerny, Schrœder, Martin, and others have practised the removal of the uterus by the vagina, and thus far with better results. A table compiled by Sänger (*Archiv für Gynäkologie*, Berlin, 1883) includes 143 cases, of whom 72 per cent. recovered, and 28 per cent. died.

Extirpation of the uterus for cancer does not save, but destroys life. In order to show how much life has been sacrificed by it, I accept all the known fatal operations as the full number, although it is certain that there have been many more. They amount to

159 cases—97 by the abdominal and 60 by the vaginal method. If we grant that in all these cases the disease affected the cervix, and that the average length of life would be seventeen months, the calculation would show more than 222 years of life—over two centuries—sacrificed by the operation. If we consider that in many of the cases the disease affected the corpus uteri, as it surely did, in which the average duration of life is two and a half years, the aggregate amount of life destroyed would be even greater.

To summarize, I have endeavored to show that

1. Diagnosis of uterine cancer cannot be made sufficiently early to ensure its complete removal by extirpation of the uterus.
2. When the diagnosis can be established, there is no reasonable hope for a radical cure; and other methods of treatment, far less dangerous than excision of the entire organ, are equally effectual in ameliorating suffering, retarding the progress of the disease, and prolonging life.
3. Extirpation of the cancerous uterus is a highly dangerous operation, and neither lessens suffering—except in those whom it kills—nor gives reasonable promise of permanent cure in those who recover. Hence, it fails in all the essentials of a beneficial operative procedure, and should not be adopted in modern surgery.

Dr. Van de Warker, of Syracuse, said that in a recent editorial expression of opinion, he took substantially the same ground as that held by Dr. Jackson upon the advisability, as a matter of expediency, of the operation of removing the uterus, as an exemption from suffering and a means of prolonging the life of the patient. Since then he has had no reason to change his views; on the contrary, he had every reason to hold to that view.

After a few general remarks on the value of scraping and the application of the cautery, he described his plan of operating, which is simply the result of carrying Dr. Sims' method to its logical conclusion. Instead of using a solution of five drachms of chloride of zinc to the ounce, he employs a saturated solution. By this plan he has a harmless extirpation of the organ. The uterus is first thoroughly scraped, it is then packed with cotton saturated with Monsel's solution in order to check bleeding; subsequently it is packed with cotton containing the saturated solution of chloride of zinc, the result is an enormous slough of the cavity of the uterus. He exhibited a number of sloughs which had been removed in this way. In one of the cases, while scraping, he found that he was almost in the bladder; he, however, decided to apply the caustic: the result was an enormous opening into the bladder. In about six weeks the opening had contracted to one-quarter inch in diameter, the woman retaining control of the sphincter in the erect position; there was some dribbling when lying down. This patient has just died. The operation was done in January, 1883. One of the specimens had been obtained eighteen months before; the woman was still well. He had operated on eight cases, three of which had since died. He considered it simply to be a question of prolonging life and arresting the downward course of the disease.

Dr. Emmet, of New York, said that he had been much pleased with the paper because it expressed his own views in regard to the operation. His experience is limited to one case, and that was unsuccessful. He now disapproves of the operation. About two years ago, a middle-aged, unmarried lady was sent to him with amenorrhœa and nervous symptoms; her family physician had made an examination, and found what he considered to be the remains of an old laceration of the cervix. She denied ever having been pregnant. On examining her, he found the same condition, and felt almost satisfied that the woman had been pregnant. About five days after the first examination, he saw eight or ten minute granulations springing up in the scar, just like wheat in a furrow. In ten days the whole cervix was covered with a mass of epithelioma. On being pressed, she acknowledged that twenty-five years before an abortion had been induced. He determined to remove the womb through an abdominal incision. The operation was a difficult one, but he finally succeeded in removing the entire uterus—the woman had no shock, and the case progressed without trouble for five days. Then came blood-poisoning. He opened the wound in the vagina, and flooded her with water. She died, and he found that, from lying on the back, several ounces of fluid had collected in the hollow of the sacrum, which were not removed by the drainage-tube or washing. If the operation is ever to be done, it should be done by the vagina, and should be confined to removing the uterus for sarcoma.

Dr. Baker, of Boston, said that he had operated in several cases, some so long ago as six years, which have not yet died. By the operation which he performed it is possible to remove the entire supra- and infra-vaginal portions of the cervix, as well as from one-third to one-half of the body of the uterus by a comparatively simple operation. He is sure that he has operated at least thirty times without a single death, and he can recall six cases, of at least five years' standing, which have absolutely recovered.

The operation is as follows: An incision is made at the junction of the anterior wall of the vagina with the cervix, and the dissection is carried up to the level of the internal os in the connective tissue covering the cervix. The same is done on the posterior surface of the cervix. The whole cervix is then removed by a transverse cut. A cone-shaped incision is next made, removing from one-third to one-half of the body of the uterus. The thermo-cautery is then applied to the denuded surface. The advantage of the actual cautery over chloride of zinc is that the patient can be kept absolutely at rest. He is sure that the diagnosis may be made early in these cases, and, if made early, he believes that the diseased tissue can be entirely removed. The cases in which total extirpation is advisable are extremely rare, and comprise those in which the disease begins in the cavity of the uterus.

Dr. C. D. Palmer, of Cincinnati, said that, so far as total extirpation of the uterus for cancer is concerned, the cases may be divided into two classes: 1. Those in which it is clearly unjustifiable. 2. Those in which it may be justifiable. The first would include almost every case of cancerous disease beginning in the cervix. The second would include those cases of sarcoma starting in the uterine body, which are very rare. It is usually impossible to determine whether the disease has extended beyond the uterus itself. He has always declined to perform the operation. Last spring he had a case which illustrated the impossibility of determining whether the disease has gone beyond the uterine body. It was a case of soft sarcoma in the body. The infravaginal portion of the neck was free from disease; the womb was freely movable, and no evidence of disease could be detected in the vagina or rectum. He was asked to remove this uterus, but declined. A few days later, he was asked to assist in the removal of a uterus. The case was the same upon which he had declined to operate. With great difficulty the organ was removed, and three small nodules were found in the anterior wall of the rectum and in the connective tissue around the uterus. The woman died in a few hours after the operation. The disease would certainly have returned in a short time.

Dr. Sutton, of Pittsburg, in speaking of the removal of the uterus per vaginam, said that it was not as fatal as ordinary ovariotomy. Schröder lost only one out of thirteen from the operation. Martin told him that his longest case lived twenty-two months after the operation. He then described the operation as performed in Europe. The woman is placed in the lithotomy position, and Simon's speculum is used to elevate the anterior vaginal wall and depress the posterior. Lateral retractors are also used. In order to prevent the constant presence of blood in the vagina, a stream of carbolized water is thrown in. An incision is made across the cervix, just below the vaginal attachment. A curved needle is then passed through the upper lip of the incision and the ends drawn out together and turned over the pubes. With the thumbnail everything above the cellular tissue is skinned back until the peritoneum between the bladder and uterus is reached. The incision is then carried across the neck. The posterior lip is then treated in the same way. The peritoneum is then opened and the opening dilated with the finger. A volsellum forceps is next passed through the opening, grasping the fundus and drawing it into the vagina. With a curved needle a double ligature is passed through the broad ligament and firmly tied. A clamp forceps is applied to the ligament, and the ligament cut. The uterus is then drawn down and the ligament on the opposite side is treated in the same way. The opening in the vault of the vagina is not sewed up. Schröder puts a large drainage-tube into the pelvic cavity, one end of the tube being outside of the vulva. The vagina is then packed with cotton saturated with iodoform. Martin sometimes simply stuffs the vagina with antiseptic material, and the patients recover. So far as the advisability of the operation is concerned he had not made up his mind.

DR. JACKSON, in closing the discussion, reaffirmed the conclusions which he had laid down in his paper.

THURSDAY, SEPTEMBER 20TH, THIRD DAY.

BUSINESS MEETING.

The Society assembled at 8.30 A. M., for the transaction of business, with closed doors.

Upon the adjournment of the business meeting it was announced that the following had been elected

OFFICERS FOR THE ENSUING YEAR:

President.—Albert H. Smith, M.D., of Philadelphia.

Vice-Presidents.—James R. Chadwick, M.D., of Boston; S. C. Busey, M.D., of Washington.

Secretary.—Frank P. Foster, M.D., of New York.

Treasurer.—M. D. Mann, M.D., of Buffalo.

Other Members of the Council.—Drs. T. Gaillard Thomas, of New York; Fordyce Barker, of New York; T. A. Reamy, of Cincinnati; R. S. Sutton, of Pittsburg.

It was decided to hold

THE NEXT MEETING

at Chicago, on the last Tuesday in September, 1884.

MEDICAL SOCIETY OF VIRGINIA.

Fourteenth Annual Meeting, held at the Rockbridge Alum Springs, September 4, 5, 6, and 7, 1883.

(Specially reported for THE MEDICAL NEWS.)

(*Continued from page 300.*)

THURSDAY, SEPTEMBER 6TH, THIRD DAY.

AFTERNOON SESSION.

DR. JOSEPH A. WHITE, of Richmond, Va., Surgeon-in-Charge of the Richmond Eye, Ear, and Throat Infirmary, read an interesting report of

CASES ILLUSTRATING DIFFERENT INJURIES OF THE EYE, WITH REMARKS ON INJURIES OF THE EYE AND THEIR RESULTS.

Compression of an eye by a blunt instrument may cause ecchymosis, opacity, with or without inflammatory suppuration of the cornea, rupture of the sclerotic near the sclero-corneal ring, hemorrhage into the anterior chamber or into the vitreous, laceration of the iris, paralysis of the sphincter of the pupil, suspension of accommodation, bursting of the capsule of the lens, stretching or laceration of the zonula of Zinn, and disturbances of the retinal function. If the eye is thrown into violent oscillations, as by concussion, some of these results may follow. Strictly speaking, there can be no such thing as *contre-coup*, so far as effects the eyeball. The damage is usually the result of flattening of the eyeball, the flattening ordinarily occurring in the antero-posterior axis, or at an acute angle to it, and the stretching in the equator or near it, thus stretching apart the sclero-corneal ring, and disarranging the tissues connected with it.

Dr. White then narrated a number of illustrative cases, and made some *Remarks on Stretching of the Zone of Zinn and Dislocation of the Lens.* Injury from compression or concussion of the eye almost invariably results in stretching this suspensory ligament of the lens, and generally results in opacity of the lens, either directly or mediately, through changes effected in the choroid or vitreous. Dislocation of the lens, besides resulting in cataract, often leads to degenerative changes, resulting in cyclitis, with shrinkage of the eyeball or secondary glaucoma, either of which may end in neuralgia or sympathetic disease of the other eye. In this connection, Dr. White reported an illustrative case, and described the operation performed by Dr. Buhl, of Bordeaux, for stretching and rupture of the external nasal nerve or infra-trochlear. A curved incision is made through the skin and subcutaneous tissue at the inner angle of the brow between the pulley of the superior oblique and the tendon of the orbicularis. A strabismus hook is carefully swept closely against the periosteum, and the nerve picked up. This is then separated from its vessels, and by gentle pulling with two pair of flat forceps, one after the other (hand over hand, as it were), it is stretched until rupture takes place. This operation has been performed for persistent ciliary neuralgia, chronic inflammatory and secondary glaucoma, intractable blepharospasm and photophobia, hydrophthalmos, and bids fair to be a great acquisition to eye surgery.

The second class of eye injuries considered are those due to entrance of a foreign body. Small iron filings penetrating the cornea may generally be removed with a magnet. The effect of a foreign body in the eye does not depend so much on its chemical nature or its size, as upon the fact that they are so frequently accompanied by germs of inferior organisms. Experiments have proved that particles of stone, glass, etc., introduced into the anterior chamber do not necessarily cause violent reaction. If they rub against the iris in its movements, then they cause pain and irritation. The same substances introduced into the vitreous humor caused no violent reaction. Iron and copper particles, although exerting a chemical action, do not necessarily induce violent suppurative reaction when introduced into the anterior chamber; but if introduced into the vitreous, sooner or later they cause detachment of the retina, or continual irritation without suppuration, and thus result in sympathetic disturbance of the uninjured eye. Iron does not produce suppuration in the anterior chamber, nor does copper in the vitreous; in the ciliary bodies only a local suppurative action results. Lead does not provoke suppuration anywhere. Metallic mercury causes inflammatory suppuration in either the anterior chamber or the vitreous.

After discussing at some length the various dominant theories of the manner of development of sympathetic troubles in the sound eye, he passed on to the consideration of the third class of eye injuries—from agents which, by their high temperatures, chemical properties, etc., affect the cornea, conjunctiva, and lids. Scalds, etc., should be treated by first thoroughly cleansing the part with warm water. A strong saccharine solution is useful in removing adhering particles of lime. Threatening iritis is to be warded off by ice-cold compresses. He opposes the local use of lead preparations. Repeated separation of the lids from each other and from the eyeball will prevent adhesions, provided the eschar does not include the cul-de-sac.

The paper concluded with a most interesting detailed account of a case of pulsating exophthalmos, in all probability due to aneurism of ophthalmic artery, with spontaneous cure.

THE REPORT OF THE COMMITTEE ON HYGIENE AND PUBLIC HEALTH,

by Dr. W. F. Barr, of Abingdon, Va., stated that nothing had been reported during the past year that was entitled to be termed an advance in this department. "Not even in our own State have any steps been taken to protect 'the people' from charlatans. Year after year have committees labored with the members of the Legislature to induce them to adopt *some* kind of a law regulating the practice of medicine, but all to no effect. Although our neighboring sister States, North Carolina and West Virginia have done good work in this respect, and Illinois, Michigan, Louisiana, and Texas have done likewise, yet in Virginia anybody who can pay the license-tax for the privilege of practising medicine, surgery, etc., can unfurl his banner, hang out his shingle, look wise, and with the assurance of Paracelsus, practise medicine. A good State Board of Health cannot be supported! But when yellow fever, cholera, or smallpox is heard of, some are aroused with a kind of 'graveyard religion,' and are willing for the doctors to labor free of charge to save them from disease and death." The report closed with an urgent appeal to the profession not to "faint in well-doing."

INVITATIONS

were received from the Blue Ridge Springs Company, the Rawley Springs Company, and a renewal of the invitation from the Rockbridge Alum Springs Company for the Society to meet next year at their favorite resorts.

Rawley Springs, Va., was selected as the

PLACE FOR THE NEXT ANNUAL SESSION,

at such time during the summer of 1884 as the Executive Committee might decide upon after conference with the managers of those Springs.

OPIUM HABIT.

The Recording Secretary, at the request of Dr. W. G. Rogers, of Charlottesville, Va., who was unable to be present, presented the following preamble and resolutions, which were unanimously adopted:

Whereas, the insidious habit of opium eating is daily increasing—a habit destructive to the health and morality of its victims, and a public calamity that should be abated by all rightful and legal means practicable; and since it is believed that this habit has been favored and increased, and doubtless, too, caused by the indefinite refilling of physicians' prescriptions by druggists, and by the selling of opium and its products in such prescriptions; therefore

Resolved, That we, the members of the Virginia Medical Society, in convention assembled, will use all proper means to prevent the *refilling* of physicians' prescriptions by druggists, whenever these contain opium, its products, or other narcotic poison, by writing upon each prescription "*this shall not be refilled*," or such other methods as may be deemed best to effect the object in view.

2. That we respectfully petition the Legislature of Virginia to enact such laws as will prevent *this evil*, by making it a penal offence for druggists to refill physicians' prescriptions containing opium, or other narcotic poisons, or to sell poisons or other medicines that are recognized as such, without the prescription of a practising physician, which shall not be refilled, but renewed by the physician, as in his opinion needed.

3. That a committee be appointed by the President of this Society to lay these resolutions before the Legislature at its next meeting, with such reasons for the same as may be deemed expedient.

4. That since this question concerns *all the people*, whose welfare and interests are so deeply involved in its solution, in a suppression of the evil, that not only the medical journals, but other papers of Virginia be requested to publish these resolutions.

Dr. H. D. Kerfoot, of Manassas, moved that the Committed appointed to petition the Legislature to enact certain medical laws, be continued, looking to a more perfect organization of the

STATE BOARD OF HEALTH,

as also to the establishment of a State Board of Medical Examiners, etc. Carried.

DIPHTHERIA,

the subject for general discussion, was then called up.

Dr. Rawley W. Martin, of Chatham, Va., opened the discussion by reading a paper on

DIPHTHERIA AS IT PREVAILED IN A CERTAIN SECTION IN PITTSYLVANIA COUNTY, VA., IN 1882,

in which he described the general range of the epidemic which so terribly devastated the southern section of this State during the summer and fall of 1882. The epidemic really began during the winter of 1881–82, and spread from a girl who attended a public school in the centre of the infected district. Since 1861, until this time, the disease had not been epidemic. The summer of 1882 was a wet season, and vegetation was unusually luxuriant. The character of the ground consists of a porous soil with a clay substratum. Several instances of direct contagion occurred. In some cases, the throat was so slightly affected as not to be complained of by the children. Among the most unfavorable symptoms were extensive swelling of the lymphatic glands and chest, and profuse epistaxis. Persistent refusal of the child to lie down was another unfavorable symptom. Some were doggedly determined to take nothing by the mouth—not even water, although thirsty. Diphtheritic paralysis was very fatal. Following the epidemic, a wide-spread epidemic of sore throat — not diphtheritic — prevailed throughout the county. The mortality was about one in seven of those attacked with diphtheria. Infants at the breast were seldom attacked. Few adults had the disease. The treatment from the beginning consisted in following the directions given in most of the works on the subject. Tincture of the muriate of iron disordered the stomach, and chlorate of potash locally did no good. Rectal alimentation was the common method of nourishing the children. Full purgative doses of mercury in the outset seemed to modify the trouble. Bichloride of mercury solution (one grain to ℥iv of water) in small doses, say a teaspoonful, acted well. Egg-nog was also valuable. In fact, alcohol was the one great remedy. From these facts, the Doctor drew the following conclusions:

1. No history of contagion could be satisfactorily traced and it is questionable whether the disease originated *de novo* or not.

2. In this, as in other epidemics, sanitary surroundings had increased the disease-producing properties of the poison germs and rendered the disease more malignant.

3. The disease requires different treatment in different epidemics.

4. That many lives could be saved if treatment could be carried out without resistance from the sufferer.

5. That mercury is not a hurtful remedy, but really seems to possess as much or more power of destroying the disease germs than alcohol.

6. That the disease may exist in the system and at the same time produce very slight sore throat.

7. That the mortality was not greater than is usual in epidemics of like malignancy.

Dr. Bedford Brown, of Alexandria, Va., followed in another paper, entitled

REMINISCENCES OF PERSONAL EXPERIENCE IN THE HISTORY OF DIPHTHERIA.

His experience, he said, dates back to 1856, as to diphtheria. Since that time he has seen the disease both in civil and military practice; both sporadic cases and cases belonging to severe epidemics. But treatment has not advanced *pari passu*. He narrated some of the first cases he met with, which prove that they were examples of the true disease; and some of the cases were so complicated with other troubles as to make their detail instructive and interesting. For instance, he speaks of a patient who had hemorrhoids at the time diphtheria attacked him. The infectious disease seized hold of the hemorrhoidal tumors, external and internal, and extensive membranous exudations formed, reaching high up the rectum, which he passed in defecation. Further on, he refers to the fact that no disease has a greater diversity of tendency to death. Thus there is tendency to death by toxæmia from diphtheritic laryngitis, nephritis, suppression of urine, uræmia, reflex paralysis, paresis, inanition, etc. Hence, always watch the route by which death is threatening, and guard with special care, that road. Dr. Brown is a strong believer in the "dual theory" as to the non-identity of diphtheria and membranous croup; arguing his point chiefly from the pathological and etiological standpoints. In his long experience before diphtheria began in his section, some twenty-six years ago, he never saw a case of membranous croup "followed by paralysis of the voluntary or reflex system of nerves." In no case of membranous croup, before diphtheria began in 1856, did he ever witness the kidney troubles that follow diphtheria so frequently. Membranous deposits never occurred on sores or elsewhere on the body, except as a laryngeal membrane before diphtheria was announced. Previous to, and during the process of membranous exudation in croup, the temperature is always high and continuous. On the contrary, who, knowing diphtheria, does not apprehend danger from sudden fall of temperature? Previous to the outbreak of diphtheria in 1856, he never saw in cases of croup, a membranous deposit in the rectum, vagina, or on the vulva, or skin. In diphtheria, the salivary glands often become enlarged; before 1856, he never observed such an effect from membranous croup. Diphtheria is to a greater or less extent infectious. Previous to 1856, he never saw a case of membranous croup that seemed to have the slightest element of infection.

Dr. Brown next referred to the action of diphtheritic poison on the sympathetic and vaso-motor system of nerves. This is chiefly manifested in its paralytic tendency, as shown by paralysis of the heart, stomach, and the digestive organs generally, as also of the kidneys, ending in suppression. Many other well-defined points of difference between diphtheria and membranous croup were brought out.

After this he passed to the *treatment of diphtheria*. Cauterizations are of no service ordinarily. Alum and tannin next came to the front. After their failure to arrest the throat affection, tincture of the chloride of iron was brought into use, and then tincture of iodine—each as a local application. Sulphate of copper and zinc, dissolved in honey and tar-water, then became a popular local remedy. Indeed, almost every conceivable form of astringent, stimulant, alterant, and caustic were resorted to as local applications. The earliest efforts at a *general* treatment of epidemic diphtheria probably consisted in the use of emetics followed by mercurial treatment. Chlorate of potash soon afterwards came into use; then muriated tincture of iron and finally quinia sulphate were added. In mild cases this combination is useful as constitutional remedies, but in addition, alcohol is needed as a nutrient stimulant in severe cases. Belladonna and strychnia have also proved valuable helps. Disinfectants and antiseptics are useful as local applications. Sulphurous, chlorinous, and other like vapors inhaled are serviceable. There are always digestive and assimilative troubles; especially in severe cases are these standing difficulties. In addition to nourishment and cleanliness of the air-passages, he recommends the following local antiseptic:

℞.—Listerine, ... f℥ss.
Cinnamon water, ... f℥iv.
Chlorinated solution of soda, . f℥ss.
Carbolic acid, ... gtt. vj.—M.
S.—Use with syringe or atomizer to throat or nose.

It combines well with the leading vegetable and mineral disinfectants.

For a local application over the salivary and cervical glands, he recommends the application of the following lotion:

℞.—Chloride of ammonium,
Chlorate of potash, . . . āā ʒij.
Rose water,
Alcohol, ... āā f℥iij.—M.
S.—Apply to the external swelling frequently and freely.

This combination is cooling or refrigerant.

For the hemorrhagic form of diphtheria, Dr. Brown recommends the combined influence of oil of turpentine, ergot, and digitalis internally, and the local spray of dilute Monsel's solution. As an internal disinfectant and tonic,

℞.—Tincture of the chloride of iron, . fʒij.
Chlorate of potash, . . . ʒj.
Tincture of nux vomica, . . gtt. xx.
Tincture of digitalis, . . . fʒss.
Water, ... f℥ijss.—M.
S.—Teaspoonful, to a child of two years of age, every one or two hours, in water.

℞.—Hyposulphite of soda, . . ʒij.
Sulphurous acid, ... f℥iij.
Water, ... f℥ij.
Glycerine, ... f℥j.—M.
S.—Teaspoonful every alternate hour, to be taken with above.

Dr. William Pepper, of Philadelphia, Penna., has written Dr. Brown that he uses, and with encouragement, minute doses of bichloride of mercury and tincture of nux vomica, but Dr. Brown has no experience in the use of this special formula.

Dr. Wm. Selden, of Norfolk, Va., gave the highest recommendation of chlorine water prepared according to *Watson's Practice*, 1st ed. He uses muriatic acid and chlorate of potash to make chlorine, and mixes one-half drachm to four ounces of water, giving one teaspoonful every half-hour, followed by whiskey toddy each time. He had never seen a patient die who was under this treatment. For a local application, he uses alum two drachms, salicylic acid one drachm, sulphur one drachm, with enough glycerine to make the preparation of the consistency of honey. This local and systemic medication is the general Norfolk treatment.

Dr. Wm. H. Coggeshall, of Richmond, gave Reiter's theory of diphtheria, which is that the fibrin-destroying function of the liver is not fulfilled as it should be, and hence fibrin accumulates in the blood. Dr. Reiter gives twenty grains of calomel at once, and ten grains every hour, until half an ounce is taken, and claims to cure all cases of the disease.

Session adjourned to 7.45 P.M.

(*To be concluded.*)

CORRESPONDENCE.

PROPER MODE OF REDUCING PARTIAL FORWARD DISLOCATION OF THE STERNO-CLAVICULAR JOINTS.

To the Editor of The Medical News.

Sir: The following letter of Prof. Cabell came too late to enable me to utilize it for the recent edition of my *Surgery*, and I therefore send it to The News, as I consider it too valuable to be lost. Yours truly,

S. D. Gross.

Dear Dr. Gross: If that part of the forthcoming edition of your *Surgery* which treats of Dislocations has not already been put to press, I wish to avail myself of your courteous offer, and to invite your attention to the particular features and treatment of a *partial* forward dislocation of the clavicle at its sternal extremity. I call it *partial*, as coinciding with the probable integrity of the costo-clavicular or rhomboid ligament, although in respect of the degree of displacement it may be fully as complete as any ordinary dislocation at this joint.

The costo-clavicular ligament is not a part of the proper articular apparatus of the sterno-clavicular joint, and yet its integrity or its rupture may very materially modify the indications in respect of the retentive means after a reduction of the dislocation. In order to reduce and retain the articular end of the clavicle in place, it is directed to carry the shoulder backwards, and maintain it in that position by such an apparatus as is used for fractures of the bone. This is doubtless correct in all those cases in which the costo-clavicular ligament is torn, but I have seen two cases in which the act of carrying the shoulder backwards greatly aggravated the forward displacement of the sternal end of the clavicle, and in which the dislocation could only be reduced by bringing the shoulder far forward; in other words, the clavicle moved exactly as it does in the normal mechanism of its movements—namely, as a lever of the first kind. The sternal end recedes as the shoulder comes forward, and *vice versa*. It is presumable that the fulcrum, during the execution of these normal movements, is at the costo-clavicular ligament, and that when this is completely torn up, the leverage action is destroyed. In such a case, the whole bone would have to be carried backwards in order to effect the return of the sternal end from its forward displacement; but if the fulcrum remains, then the shoulder has to be brought forward in order to carry the sternal end of the clavicle back into its proper place. Certainly this was found to be necessary in the two exceptional cases to which I have alluded.

That this is a more common occurrence than is supposed I think exceedingly probable, for some writers, notably Bryant, speak of the difficuly of keeping the articular end of the clavicle in place after reduction without forcible pressure directly applied. I think it probable that in some of these cases the difficulty would have been lessened by advancing the shoulder.

Very truly yours, J. L. Cabell.

University of Virginia,
June 12, 1882.

NEWS ITEMS.

ATLANTIC CITY, N. J.

(*From our Special Correspondent.*)

Atlantic City has at length accepted the views of the State Board of Health of New Jersey and of very many Philadelphia physicians, as to the necessity of sewerage. It has contracted with a company which, by means of approved sewers, will carry all fouled liquids to a pumping station outside of the city limits, from which it will be conveyed, by means of a force-pump, three or four miles away, and then filtered and precipitated so as to form a compost and to leave clear water. With this and its excellent water supply the city will have secured the first essential conditions of a health resort by the sea.

Typhoid Fever in New York.—According to the records of the Board of Health, typhoid fever has alarmingly increased in New York during July and August, and this increase will continue as cold weather sets in, and the city fills up with people from the country. A map of the cases, so far as prepared, does not show that the disease is confined to any particular locality, but is rather distributed generally over the city among those who do not avail themselves of early medical advice.

The Board calls attention to the neglect of proper disinfection in typhoid fever, as is shown in the reports of their inspectors. In several instances already, where there were no sanitary defects to account for it, five or six cases have occurred in one family. In these instances it has been found that the undisinfected excreta of the patients have been left for hours in the room where the sick and well have been together. The physician is often not called in until the disease has progressed into the diarrhœal stage, and the family are often unable to secure his continual services. He sometimes contents himself with advising disinfection, in a general way, without particularizing as to quality or method. It is no uncommon thing to find saucers filled with chloride of lime in one corner, and a pile of stained and infected bedclothes in another. It is of little use to empty a privy or repair a broken sewer if the sick-room itself is neglected. The vital point in the sanitary treatment of typhoid fever is the efficient disinfection of the clothing, bedding, and discharges of the patient, and this is considered to be an important factor in controlling the disease during the approaching winter.

The Board has issued an address to the public in which the importance of disinfection is insisted upon.

In this connection, we may refer our readers to our Special Article on the subject of typhoid disinfection which appeared in the issue of The Medical News for September 1, 1883, page 244.

Yellow Fever at Pensacola.—No case of yellow fever has appeared in the city of Pensacola, the disease having been confined to the Naval Reservation.

During the past week there have been reported at the Navy Yard eleven new cases of fever and one death.

Yellow Fever at Havana.—There were one hundred and fifty-two deaths from yellow fever at Havana during the month of August. During the week ending September 7th there were eighteen deaths from the same cause.

Yellow Fever at Vera Cruz.—At Vera Cruz there were nineteen deaths from yellow fever during the ten days from August 20th to 30th.

Yellow Fever in Mexico.—Surgeon-General Hamilton, of the Marine-Hospital Service, has information from Yuma, Arizona, of the existence of yellow fever in Guayamas and Mazatlan, in Mexico. He says, however, there is no reason for fear that the disease will spread into Arizona, and from his information as to the character of the country, and the climatic conditions of the region in Mexico in which the disease has appeared, he does not think it will spread much there.

Later reports state that the disease is abating at Guayamas.

Sanitary Inspection of the Mississippi.—Secretary J. H. Rauch has issued the following:

"The Executive Committee of the Sanitary Council of the Mississippi Valley hereby gives notice that its supervision of inspection at the port and in the city of New Orleans, and the inspection stations below Vicksburg, at Fort Adams, Miss., and below Memphis, at President's Island, Tenn., will be discontinued on and after Saturday, September 15th."

Smallpox in New Orleans.—For the week ending September 8th, there were eight cases of smallpox in New Orleans.

The Mortality in New Jersey.—The State Board of Health of New Jersey reports a marked decrease of mortality for the year ending July 1, 1883.

Leprosy at San Francisco.—A case of leprosy was brought to San Francisco by the last steamer from Honolulu. The quarantine officers refused permission for him to land. A writ of habeas corpus has been issued, and the matter will come up in the Superior Court for decision.

Best Method of Testing Milk.—Dr. E. H. Bartley, Chemist of the New York State Board of Health, recently delivered a lecture to the milk-dealers of Brooklyn, in which he said that milk which showed a specific gravity of 100, at a temperature of 60° by the common lactometer, and 10 per cent. of cream by the cream gauge, could be safely sold as pure milk.

American Academy of Medicine.—The annual meeting of the Academy will be held at the New York Academy of Medicine October 9th and 10th.

Death of one of the French Cholera Commissioners.—Dr. Thuillier, a member of the Pasteur Scientific Mission, died at Alexandria on Tuesday, the 18th inst., of cholera.

Professor Matthew Hay.—Dr. Matthew Hay, late assistant to the Professor of Materia Medica in the University of Edinburgh, has recently been appointed to the Chair of Medical Jurisprudence in the University of Aberdeen, rendered vacant by the resignation of Prof. Ogston.

"Hospital Saturday" in London.—On September 1st, collections were made in London and the suburbs for what is known as the "Hospital Saturday Fund." The collection was made in two ways. Money-boxes, which were in many cases in charge of ladies, were placed at the corners of streets, near coffee palaces, and at other places where there were likely to be large crowds of people. There were twelve hundred ladies thus engaged in various parts of London. A collection was also made in the workshops of the capital by means of subscription sheets.

There is every reason to believe that the collections will considerably exceed in amount those of last year. It is thought that the street collection will produce at least £3000, and the workshop collection £7000.

Nephrectomy in Birmingham.—On August 11th, Mr. Bennett May, excised the right kidney of a female patient, æt. 24, at the Queen's Hospital, Birmingham. The organ, which was the seat of tubercular disease, and weighed nearly a pound, was removed by lumbar incision. No urine was secreted after the operation, but, with this important exception, there was little indication of local or constitutional disturbance till the patient's death, which occurred suddenly five days afterwards. The necropsy showed, as the suppression of urine indicated too surely, that the other kidney was also disorganized by similar disease.—*British Med. Journal*, Sept. 1, 1883.

Health in Michigan.—Reports to the State Board of Health for the week ending Sept. 8, 1883, indicate that consumption, influenza, neuralgia, and puerperal fever have decreased in area of prevalence.

Compared with the average for the month of August in the preceding six years, remittent fever was considerably less prevalent; intermittent fever, dysentery, consumption, and whooping-cough less prevalent, and bronchitis and neuralgia more prevalent during August, 1883.

Including reports by regular observers and by others, diphtheria was reported present during the week ending Sept. 8, and since, at fourteen places, scarlet fever at twelve places, and measles at four places.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM SEPTEMBER 10 TO SEPTEMBER 17, 1883.

Bartholf, John H., *Captain and Assistant Surgeon.*—Station changed from Fort Lapwai, I. T., to Vancouver Barracks, W. T. —*Par. 2, S. O. 123, Department of the Columbia, September* 6, 1883.

Banister, J. M., *First Lieutenant and Assistant Surgeon.*—Assigned to duty at Fort Adams, R. I.—*Par. 3, S. O. 170, Department of the East, September* 10, 1883.

The Medical News *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the News *should be addressed to No. 1004 Walnut Street, Philadelphia.*

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. XLIII. SATURDAY, SEPTEMBER 29, 1883. NO. 13.

ORIGINAL ARTICLES.

OBSERVATIONS ON THE SALTS OF NICKEL, ESPECIALLY THE BROMIDE OF NICKEL.

BY J. M. DA COSTA, M.D.,

PROFESSOR OF THE PRINCIPLES AND PRACTICE OF MEDICINE IN THE JEFFERSON MEDICAL COLLEGE, PHILADELPHIA.

NICKEL and its salts have been very little employed in medicine. I cannot, indeed, find that they have ever been subjected to systematic study. Simpson made some slight trials with the sulphate of nickel, and thought it a gentle tonic, and useful in a case of severe and obstinate periodic headache; and I observe, in the last edition of the *U. S. Dispensatory*, that Dr. Palmer, of Florida, has made use of the same salt, and has reported it to be a sedative and soporific, and of avail when opium is not admissible. In the number of the *Lancet*, for January 27th of this year, Broadbent alludes to the salts of nickel having an action on the blood, and refers to a previous paper in the *Clinical Society's Transactions*, vol. ii., in which I find that nickel was given associated with iron or other tonics.

Our information about nickel and its salts is thus very slim, and when I began its employ, about a year ago, I was not aware that even this slight knowledge existed. The preparations which I have tested were made for me with great care by Mr. McKelway, and leave, in purity, nothing to be desired. He has made the chloride, the sulphate, the acetate, the phosphate, the bromide; but after investigating them all, I have settled down on the sulphate and the bromide as the best preparations. And in this paper, which is to be looked upon merely as a preliminary one, I shall give some of the results I have arrived at with reference to them.

As regards the sulphate, the preparation I employed was made by digesting nickel filings in dilute sulphuric acid and evaporating. A salt results of a chrome-green color, very deliquescent, and very soluble in water. I used it in solution from one to three grains; sometimes in pill. I found it, in the smaller dose, well borne by the stomach; I have given it up to five grains, but it then, in some persons, occasions giddiness and nausea. In this dose it has no decided effect on the pulse or temperature, perhaps lowering the former somewhat in frequency and slightly reducing the latter. Of its soporific effect I saw no evidence, but I have known sulphate of nickel prove something of an anodyne; for in a case of subacute rheumatism at the Pennsylvania Hospital in which it had been stopped, the patient asked to have it prescribed again, as his pains were much relieved while taking it. Of its striking tonic effect, I cannot say that I have seen any proof. I have tested it carefully for night-sweats, and found its action only very slight. But I have had some excellent results with it in small, frequently repeated doses, or in doses from one to two grains four times daily, in cases of obstinate diarrhœa. In one such case, a man at the Pennsylvania Hospital affected with trembling associated with beginning sclerosis and valvular disease of the heart, it proved successful, after many remedies had failed. Continuing it subsequently, the heart grew more regular; the nervous phenomena remained the same. In some instances of chronic catarrh of the stomach it has seemed to me to do much good, but in this respect the chloride answers even better. In the case of a professional man with marked indigestion and some albumen in the urine, in whom iron produced headache and otherwise disagreed, the digestive disorder was speedily influenced, and the albumen disappeared while taking one grain of the chloride three times daily. More than this did not agree. It had also a calming influence on the nervous system, and this has been mentioned to me also in other instances both from the chloride and the sulphate. I have tried the sulphate in some cases of typhoid fever in which diarrhœa was a prominent symptom. But while not having tested it sufficiently to have formed a positive opinion, I may say that its action was far less than I had anticipated, and that it disappointed me.

With reference to the bromide of nickel, which I do not think has been before employed in medicine, I have made a number of observations, and should have completed many more had it not been for the occasional giving out of the supply in the midst of them. The specimens which I had were very pure. They were made by digesting nickel filings in bromine and water, and evaporating carefully to crystallization. The salt is green in color, deliquescent, and soluble in water, and in the dose in which it is necessary to give it, is not offensive to the stomach. The skilled pharmaceutist who made these nickel preparations for me has prepared a syrup mixed with orange-flower water which is readily taken. A dessertspoonful contains five grains. He has also made some compressed pills of similar strength, but these do not keep well. Yet the remedy may be prescribed in the form of pill made with gum tragacanth. In using bromide of nickel I soon saw that I obtained from it the effects of the other bromides, but the effect came from very much smaller doses. Thus I find five grains to seven and a half grains an average dose; ten, a decided one. And, when this is indicated, it is best to give five grains soon repeated, as less likely to disturb the stomach.

The influence on the nervous system, of the bromide of nickel, is shown by its relieving headache, especially of the congestive form, in its effects on convulsive movements, and its general quieting tendencies. But the main question to be solved was: Does it prove of service in epilepsy? I found it act quite as well as any bromide, and as happens with all, we sometimes by a change to it obtain results which the others no longer yield. It is unnecessary to go into the details of many cases; but I will select a few illustrative ones. First that of a laborer, forty years of age, who has been under observation since February, 1881, at the clinic of the Jefferson Medical College. Dr. Hughes, the chief clinical assistant, who greatly interested himself in procuring an accurate history of the malady, found that it dated from 1865, since which time the man had had severe attacks of epilepsy, as many as three or four daily, and never less than two a week. There was no apparent cause for the affection; no history of epilepsy or kindred malady in the family; no injury or severe illness; no sunstroke; no syphilis; no signs of cerebral tumor. Ordinary doses of the bromides were found to be totally ineffectual, and bromide of potassium and bromide of sodium each thirty grains, with a few grains of iodide of potassium, were given three times daily; also two minims of Fowler's solution thrice daily. This treatment was continued for a month, when signs of bromism became marked; the dose was lessened one-half, and then given for another month. The result was that during the first month he had four severe attacks each week; during the second month one or two daily. Placed subsequently on biborate of sodium, ten grains three times daily, and kept on it for months, the effect was a decided reduction in the number of the attacks; but the improvement was not permanent, the seizures became as bad and as frequent as ever, and after trying various remedies he had to go back to the bromides to obtain any kind of relief, yet there was still no week without several fits. In December, 1882, he was placed upon nickel bromide, five grains three times daily, and for two weeks had no attack; during the six weeks in which the drug was taken, he had but five. Unfortunately at that time the supply gave out.

A yet more striking case was that of I. S., a laborer, 20 years of age, also under treatment at the clinic. When seen in March, 1881, he had been subject to epilepsy for fourteen years without discoverable cause. Two months was the longest period without an attack; for the three years previous to applying at the clinic, he had been having two attacks weekly. Strychnia was at first very beneficial, but ultimately lost its effect entirely, and he had two or three fits daily. Twenty grains of bromide of potassium with ten of biborate of sodium, given three and subsequently four times daily, kept the attacks down to about one a month. In December, 1882, nickel bromide, five grains, three times daily, was substituted and kept up for nine weeks; during which time he had no attack.

In the case of Alice S., a colored woman fifty years of age, at the Pennsylvania Hospital, epileptic seizures had been going on since the age of thirty. The fits happened at intervals of about a week, and always in the way that three or four occurred in one day, and then she had a week's freedom from them. She was always much improved by treatment, especially by the bromides; but when this was neglected the seizures returned in their original severity. When admitted into the hospital, they were of weekly occurrence, three or four in one day. There was no history of specific affection; the urine was normal, and disease of any organ could not be found. Bromide of nickel was administered in five grain doses three times daily during the first week. The remedy produced no gastric disturbance, the appetite was not interfered with, and the bowels continued regular. The temperature record carefully kept during this period by Dr. Grayson, showed a slight depression below the normal. At the end of the week there was no recurrence of the epileptic attacks. During the following week the remedy was increased to seven and a half grains at a dose; and this period also passed without any return of the convulsions. Ten grains were now administered three times daily, and for the succeeding ten days the woman continued free from any manifestation of her disease. At the end of this time, however, the controlling power of the nickel became less; the fits returned, although they were fewer and of brief duration. Bromide of potassium was then given, under which they remained as just mentioned. During the whole time of the administration of the nickel, there was no appreciable effect upon the heart's action; the urine was repeatedly examined and found free from abnormal ingredients, nor was there any alteration in the quantity or the composition.

Some of the points mentioned in this case, I have studied also in others, such as the effect on temperature, on the circulation, and on the secretions. But my observations are as yet not complete enough to warrant the enunciation of definite results. Yet I think I am right in concluding that bromide of nickel slightly lowers the temperature, has little or no influence on the pulse, if any, rendering it somewhat slower; and does not act on the skin or bowels, or on the composition of the urine, the quantity of which may remain normal or be slightly increased. Its effect on the nervous system is that of a sedative, without, however, producing a weakening or depressing influence.

The result shown from a smaller dose than that of the bromides which are generally employed, is a striking feature. Nor can this be accounted for by the bromide of nickel having in its combination a greater percentage of bromine. The combining weight of nickel is higher than that of sodium. Sodium is 23.3; nickel 29.5; potassium 39.2. There is, therefore, in the nickel bromide some special action.

Of course, this inquiry suggested a trial, in epilepsy, of some of the other salts, such as the sulphate and chloride, to see if by themselves they had any specific influence similar to the preparations of silver and of zinc, and I have prescribed these nickel salts to epileptics for some weeks before beginning with the bromide. The result was, the patients had rather fewer attacks. But while not inert, no striking influence was exerted by the drug; certainly, nothing that compared with the bromide salt.

In conclusion, it seems to me that the preparations of nickel, especially the bromide, will be found additions to our therapeutic resources; and are certainly worthy of more careful study than they have hitherto received.

SERPENT VENOM AS A REMEDIAL AGENT IN TETANUS.

BY A. O. AMEDEN, M.D.,
OF GLENS FALLS, N. Y.

A FEW years ago I experimented with the venom of the rattlesnake in a case of traumatic tetanus following a punctured wound of the foot, and with a most satisfactory result. The patient was a man about twenty-five, healthy, and by occupation a laborer. The first tetanic symptoms occurred the third day after receiving the wound. Twenty-four hours later there was complete opisthotonos and other symptoms of the most aggravated form of tetanus. A few hours later the patient was perceptibly worse, and the case presented no indications of a favorable termination. All the remedies at my command including chloral, bromide of potassium, and chloroform, were freely used, without any apparent beneficial effect. Woorara I could not obtain.

I marked the contrast between the appearance of tetanus and that of snake-poisoning. In the one, some subtle influence is at work in the nervous centres that causes extreme rigidity and spasm of nearly the entire voluntary muscular system. In the other, an equally poisonous principle attacks the medulla oblongata and spinal cord, producing paralysis of both the involuntary and the voluntary muscles. These two poisons so obviously antagonistic ought to counteract each other. If woorara, I thought, possesses curative properties in tetanus, serpent venom ought to do the same. Being then in a locality in which the rattlesnake is fearfully numerous, I resolved to make the experiment.

Availing myself of the services of an experienced snake-catcher, I soon obtained venom fresh from the fangs of one of these reptiles; with this I moistened the point of a hypodermic syringe and inserted it beneath the cuticle in the upper dorsal region near the spine. Symptoms of snake-poisoning rapidly followed, with a decided amelioration of the tetanic spasms and rigidity, which entirely ceased at the end of ten hours, and the patient enjoyed a quiet sleep of six hours' duration.

Thirty hours after the insertion of the poison, however, rigidity with slight spasms again came on. A second introduction of the venom was made as before, and no further trouble with tetanus was experienced, and the patient made a fairly rapid recovery. But extreme prostration followed the last introduction of venom, which necessitated active alcoholic stimulation, as in all cases of accidental snake-poisoning. There was no diffuse inflammation from the wounds, as frequently happens when persons are bitten in the limbs by these snakes, and no other results that would deter me from making a second experiment in the same manner.

I am of the opinion that the second insertion of the venom was too much, and might have been withheld. I believe that this snake venom, which has been properly called "crotaline," can be used with comparative safety, and may yet prove to be a valuable remedial agent in tetanus, and possibly in some other spasmodic diseases.

NOTES OF THREE CASES OF NERVE-STRETCHING FOR SCIATICA.

BY ROBERT PATTERSON ROBINS, M.D.,
OF PHILADELPHIA.

THE subject of nerve-stretching has recently been attracting considerable attention amongst surgeons, but the reports as to its efficacy in effectually relieving the extreme pain of an advanced case of neuralgia, have varied from an enthusiastic advocacy to a decided condemnation. Without an adherence to either of these extremes, I desire to add to the list already compiled, with laudable industry, by Dr. W. J. Chandler, of South Orange, N. J.,[1] three cases which have recently come under my observation, in which operative interference was attended with gratifying results. Before detailing these cases it should be noted that since the publication of Dr. Chandler's paper, Dr. Randolph Winslow, of Baltimore, has added one more case of successful operation[2] to the list made by Dr. Chandler. The details of the three cases of which I have made notes, are as follows:

CASE I.—James W., Irishman, æt. 42, brickmaker, first came under my notice March 3, 1883, suffering from severe continuous pain in the buttock and posterior aspect of the right thigh. This was his second attack, the first having taken place three months previously, and having disappeared after a persistent course of electricity had been applied. This second attack, however, defied the battery, and the pain was only palliated by large hypodermic doses of morphia, without being more than temporarily banished. This was the history of the case when I saw the patient for the first time. After a thorough examination of the affected member, I suggested operative interference, warning the patient, however, that failure to give more than temporary relief might be the result. He agreed to the operation, and on the fourth of March the operation was proceeded with. The patient was thoroughly etherized, and an incision was made in the line of the nerve in the upper-third of the posterior aspect of the thigh, and the nerve was easily discovered and hooked up within its sheath by the left forefinger to the lips of the wound. The left forefinger was now reinforced by the right, and strong continuous traction was made in both directions. After an interval of two or three minutes, traction was again applied in the same way, and the nerve was then returned to its position. A drainage-tube was inserted, the wound was closed by three silver sutures, and the whole was covered with a wad of oakum and loosely bandaged.

On the next day (March 5th) the patient was found in a very comfortable condition, without any pain, but complaining that his leg was "asleep." His pulse and general condition were good, his temperature was normal, and his appetite was ravenous. During that, as well as several succeeding nights, his sleep was disturbed, but small doses of bromide of potash removed this symptom. On the sixth day (March 10th) the drainage-tube was removed, and the wound healed kindly without any drawback. In a week and a half he was allowed to leave his bed, but was ordered to use a crutch in walking about the room. At the expiration of the third week I had the satisfaction of seeing him walk into my office, a distance of about a mile from his home, without any support whatever. Up to the time of writing (August 3d) he has had no return of the disease.

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[1] Medical Record, Nos. 617, 618.

[2] Maryland Medical Journal, No. 98.

Case II.—Michael S., Irishman, æt. 36, also a brickmaker, was sent to me on March 27th by Case I. He was suffering from a severe attack of sciatica in the left buttock and thigh, and extending also along the course of the internal popliteal and posterior tibial divisions almost to the heel. When I saw him first in his own house, he was suffering acute pain which made it impossible for him to use the limb. For temporary relief from this pain I gave him a hypodermic injection of one-sixth of a grain of morphia; and instructed him to forcibly flex the thigh upon the abdomen and then to quickly straighten out the leg. This manœuvre was attended by instant, but only temporary, relief, and at his request I determined to operate. The next day (March 28th) the operation was performed by the same method as that pursued with Case I., and the wound dressed in the same manner. The next day I found the man entirely free from pain, but very much alarmed at the temporary paresis which followed the operation. This latter symptom gradually passed away, and the patient made a rapid recovery. He also has had no return of the sciatica up to this date.

Case III.—Ann C., Irishwoman, æt. 31, housewife, had a history of sciatica of several years' standing, and recurring every spring and autumn with perfect regularity. The pain was confined to a limited area extending from the crease of the buttock to about the middle of the thigh. The attacks were very severe, and were periodic, occurring at about 5 p. m., and lasting well into the night. Quinine sulphate in five to ten-grain doses would abort a paroxysm, but had no permanent effect upon the disease. Electricity and counter-irritation were tried in addition to the quinine, but without producing any lasting impression.

On April 14th, about a month after she came under my care, I operated upon her in precisely the same manner as in Cases I. and II., but kept up the quinia during convalescence. The wound healed kindly and she was free from any pain until May 5th, when she experienced a return of the disease, but of by no means so severe a character as her former attacks. This relapse speedily disappeared after a few hours, quinine and a blister having been used, and the patient has had no return of the disease; I should state, however, that she removed to a more healthy neighborhood within the three weeks succeeding the last attack.

These cases are too few to allow of any inference being drawn from them, but added to those previously reported, they will make a very large percentage of cases with favorable termination after operation. Dr. Chandler's list gives the statistics of 400 cases of nerve-stretching performed for various causes. Of these, 70 were done for sciatica, with 1 failure, 3 temporary improvements, 1 doubtful, and 65 cures, *i. e.*, 93 per cent.

As for the operation itself, it is of the simplest. One point of election is, of course, in the upper part of the thigh just below the crease of the buttock, where the nerve is covered only by skin and fascia. Dr. Winslow operated still lower down, "but above the popliteal space," where the nerve may be exposed, "as it passes under the long head of the biceps . . . and is easily exposed by drawing apart the biceps and the semitendinosus." (*Maryland Med. Journ.*, loc. cit.) But in the three cases just detailed, the first of these positions was chosen with the idea that it was better to stretch the nerve as high up as possible. I had no means of measuring the amount of tension upon the nerve, but it was not as great as in Dr. Winslow's case, where the leg was lifted from the table. This, I confess, I had not the temerity to attempt.

There was no especial treatment before or after the operation. The only indications were to lessen the extreme pain and to promote the speedy healing of the wound. When the drainage-tube was removed, ung. zinci ox. was applied until the wound was entirely healed. Tr. nucis vom. (gtt. v) and tr. cinchon. comp. (f℥j) were given three times a day for a week after the operation.

HOSPITAL NOTES.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

Service of Louis A. Duhring, M.D.,
PROFESSOR OF DISEASES OF THE SKIN IN THE UNIVERSITY OF PENNSYLVANIA.

(Reported by Henry Wile, M.D.)

EPITHELIOMA ET MYXOMA NASI.

A man, seventy-six years of age, has been sent here to get advice in regard to an affection of the nose. On the left ala, and extending upon the cheek, is an ulceration about the size of a silver half dollar, covered with a brownish crust, in the clefts of which we see a puriform exudation. The crust is distinctly granular, and within its border split pea-sized nodules can be seen which are very suggestive. Removing part of the crust, the surface exposed bleeds readily, and presents that unevenly elevated, granular appearance which is characteristic of epithelial cancer. It is a very common variety, and belongs to that class in which the lesion is more superficial, and on this account the prognosis is favorable. By proper operative interference the complaint may be cured. The operation depends greatly upon the locality and rapidity with which the disease seems to be spreading. The patient states that he has had the lesion about five years. As yet, the deeper elements of the skin are not involved; the sebaceous glands, however, around the periphery are enlarged.

On the right side, and protruding from the nostril, is a tumor about the size of a large cherry. The patient claims to have had this seven or eight years. It has no relation to the lesions before described, but has developed altogether independently, slowly, and has its own special characteristics. When seized between the fingers, it is distinctly soft and compressible, and upon pressure indentations may be made, also changes in size and shape. The surface presents a bluish-red hue, is smooth and shining, while here and there small telangiectases may be noticed. The clinical picture is sufficient to warrant us in designating the new growth as a myxoma. A microscopic examination would reveal the characteristic stellate and fusiform cells with a gelatinous intercellular substance. The tumor is benign, and gives no trouble beyond that, on account of its size, it blocks up the air-passage. The treatment will be radical, and consist of removal by means of the écraseur. The patient, however, has come here more on account of the lesion on the left wing of the nose; and in the way of treatment, we will direct the thorough application of caustic potash, with some simple dressing. This treatment is simple and effective. After the use of the potash, the percentage of cures is a large one.

ECZEMA SQUAMOSUM.

A boy, sixteen years old, presents a superficial eruption of a squamous type, in the form of pale-red patches on his face, more particularly the cheeks, and on the sides of his neck. The question of treatment in these cases is important. The use of strong ointments would irritate the skin and aggravate the disease. We would advise the use of some mild application, like a lotion of boracic acid; this to be used for one week; then a weak calomel ointment of twenty grains to an ounce of lard.

ECZEMA PAPULOSUM.

A man, forty-three years old, has, as you see, a slight eruption on both wrists. The lesions, *per se*, are insignificant, but they are enough to cause great inconvenience on account of the subjective symptoms to which they give rise. The scratches on the skin about the seat of the lesions give evidence of intense itching. This is a common phase of papular eczema, disfigured by scratches, in which the itching is entirely out of proportion to the amount of eruption.

Cases of this kind require both internal and local treatment. The internal treatment will consist of cutaneous tonics, and locally we will direct our attention to the itching, for which we will order the following:

℞.—Acidi carbolici, ... ʒj.
Glycerinæ, ... fʒij.
Alcohol. . . . . . f℥iv.
Aquæ, . . . q. s. ad. f℥viij.

followed later by an ointment of ammoniated mercury, thirty grains to the ounce.

ACUTE ECZEMA VESICULOSUM OF THE FACE.

A girl, sixteen years of age, pale and poorly nourished, was attacked three weeks ago with the eruption which now occupies the ears and the whole of the face, more especially the lower half. It presents a bright-red inflammatory appearance, and is characterized by flat vesicles and pustules. The ears are puffed and swollen. The patient states that she suffered a similar attack last fall.

In the treatment of such a case, we must be careful in the selection of our remedies, not to use them too strong, and thus aggravate the disease. For instance, a strong sulphur or tar ointment would here cause great irritation. We should use some mild, soothing application, as of oxide of zinc, or boracic acid, or black wash. In this case, we will order the black wash three times a day, to be followed immediately by the oxide of zinc ointment. The bowels should be regulated by means of a saline laxative, and the following be administered:

℞.—Liq. potassii arsenitis, . . fʒiss.
Vini ferri, ... f℥iv.
Sig.—One teaspoonful three times a day.

MEDICAL PROGRESS.

Localization of Motor Areas in the Brain.—MM. Charcot and Pitres have, in a second communication on this subject, taken into consideration destructive lesions of the motor area, the object being to prove that these always produce permanent paralysis, and lead ultimately to contracture of the paralyzed muscles and secondary degeneration of the spinal cord. The conclusions of their paper may be summarized as follows: Cortical lesions capable of giving rise to total permanent hemiplegia are always situated in the motor area, and they occupy the whole or, at any rate, a good part of the surface of this motor area. 2. Lasting paralysis of the arm and leg on one side, the face being unaffected, is due to lesion of the upper half of the cortical motor area of the opposite hemisphere. 3. Paralysis of the face and arm on the same side, the leg being unaffected, denotes a lesion of the lower half of the cortical motor area of the opposite hemisphere. 4. The cortical motor centre which governs voluntary movements of the face is situated at the lower end of the opposite ascending frontal convolution. 5. The cortical centre governing movements of the arm is situated at the middle third of the ascending frontal convolution, or perhaps a little above this. 6. The paracentral lobe is the seat of the centre for movements of the leg; and 7. Destructive lesions, even when very extensive, if situated in the non-motor area, never give rise to secondary degenerations, whilst destructive lesions of the motor area are always accompanied after the lapse of a certain period of time by descending changes in the pyramidal tract. In a subsequent communication (August) to the same periodical, the authors study the relations of partial epilepsy with cortical lesions. The following extracts will sufficiently express their views: "When during the interval between his attacks a patient who suffers from epileptiform convulsions shows no signs of any permanent paralysis, the lesion is either quite superficial, or else it is situated in the neighborhood of the motor area. When, on the other hand, the patient during the interval between his seizures is permanently hemiplegic or monoplegic, we should infer that there is situated in the motor cortical area a more or less limited destructive lesion. From the standpoint of diagnosis we must not take into account those transient, post-epileptic paralyses which come on immediately after a seizure, last from some minutes to a few days, disappear spontaneously at the approach of a fresh seizure, and are far from being uncommon. They appear to be the result of temporary exhaustion, of fatigue of the nerve-elements after the exaggerated activity which has provoked the attack, and have no diagnostic value as regards the locality of the cortical lesion determining the convulsions. . . . It is, then, the paralysis which must determine the diagnosis. . . . The existence of epileptiform convulsions of the Jacksonian type ought to make us think of a cortical lesion, and the coexistence or absence of any permanent paralysis ought to tell us whether or not the lesion is situated in the area of the motor convulsions.—*Med. Times and Gazette*, Sept. 8, 1883.

Absence of the Spleen.—Dr. Isidor Mehrer reports the case of a woman, æt. 45, who, on post-mortem examination, was found to have no spleen. All the other organs were normally developed. Rokitansky states that the spleen is only absent in acephalous monsters, and Birch-Hirschfeld has reported one case in an abnormally developed child.—*Wien. Medizin. Presse*, Sept. 2, 1883.

Danger from Glazed Earthen Vessels.—M. Pérusson, a chemist at Limoges, declares that the use of glazed earthenware vessels is dangerous, inasmuch as the glaze frequently contains lead oxide, which becomes soluble in the presence of acids. One hundred grammes of milk were left to ferment in a glazed receptacle, and over grs. iij of sulphate of lead were removed from it. When the glaze becomes rugged, the interstices are filled with metallic and fermenting substances; thus the danger is increased.—*Sanitary Engineer*, Sept. 20, 1883.

Nephrectomy.—The operation of nephrectomy was performed in Dublin in August by Dr. Kidd, Master of the Coombe Lying-in Hospital, on a woman, aged twenty-eight. She was first admitted into the Coombe Hospital in February, 1882, when she gave the following history: In October, 1880, she suffered from a severe wetting, and, from that time, menstruation, previously regular and normal, had recurred at fortnightly intervals, being profuse and accompanied by rather severe pain referred to the hypogastrium. From the same date, the patient had suffered from great irritability of the bladder, being unable to retain urine for more than ten minutes at a time, whilst micturition was constantly accompanied by very severe scalding or cutting pain referred to the external orifice of the urethra. The urine was then healthy, and no cause could be found either in the urinary or genital tracts to account for the pain. Some time afterwards, the urine became distinctly purulent, and the mucous membrane of the bladder, examined by means of the endoscope, was seen to be very red and vascular. The passage of a sound into the bladder gave rise to great suffering, and therefore a permanent vesico-vaginal fistula was established by operation, without, however, being followed by the expected relief. In May of the present year, the patient again came under notice, suffering from the same symptoms as formerly, but a movable tumor was now felt in the right hypochondrium, in general shape and consistency resembling an enlarged kidney. In the situation of this tumor, the patient complained of much pain, aggravated by lying on either side. The diagnosis was made of a right kidney enlarged by abscesses. In consequence of the severe pain and the irregular hectic and wasting of the patient, Dr. Kidd decided on removing the kidney, and the operation was carried out, under bichloride of methylene, on July 12th, and lasted altogether about an hour and a half. The incision was made through the anterior abdominal walls over the length of the tumor. The peritoneum was adherent over the front of the kidney, and there were several firm adhesions posteriorly also. There were a great number of separate abscesses found in the substance of the kidney. Hempen ligatures were used to tie the pedicle, which consisted of the renal vessels, ureter, etc.; and the pedicle was then dropped back into the abdomen, a glass drainage-tube inserted, the peritoneal cavity carefully cleansed, and the wounds closed up. The patient at first seemed to rally well from the operation, but died twenty-four hours afterwards from collapse, without any hemorrhage having taken place.—*Med. Times and Gazette*, Sept. 8, 1883.

The Third Sphincter Ani.—Dr. Edward Laimer, in an article on the anatomy of the rectum, concludes that the third sphincter ani is nothing more than a collection of the circular fibres of the intestine which have become heaped together by the action of the longitudinal muscular fibres on one half-side, and as a rule on the right; these are found, on cross-section, to consist of three-sided muscular bundles; whereas, if they do not become heaped together on the other side of the rectum, they at least retain their normal situation.—*Medizin. Jahrbücher.*, 1883, Hft. 1.

Infantile Menstruation.—Dr. A. Van Derveer, of Albany, reports the case of a child, æt. two years and seven months, who began a regular normal flow, lasting from four to five days, when she was four months old, and which has continued every twenty-eight days since. She weighs forty-nine pounds. Features and form are those of a girl ten or twelve years old. Her mammary glands are as large as a small orange. The mons Veneris is well developed, and covered with a full growth of hair. The external labia large, and all parts of the vulva fully formed. She is bright and intelligent, but easily irritated, especially so at the beginning of the menstrual epoch. She is not allowed, nor does she seem to care, to play with children of her own age. Her appetite and tastes belong to a child much older. All functions seem to be performed normally. Has never been troubled with leucorrhœa. Has never shown any disposition to handle her parts or masturbate in any way. Is, in fact, quite modest with her mother, and particularly so with her father, and when the physician made his examination.—*Amer. Journ. of Obstet.*, Sept. 1883.

Suture and Transplantation of Nerves.—Dr. E. G. Johnson, of Stockholm, in a recent number of the *Nordiskt Medicinskt Archiv*, after referring to the literature of the subject, gives the results of his own experiments made in the laboratory of the School of Medicine at Stockholm. In sixteen cases he reunited, by means of a catgut suture, the entirely divided ends of the sciatic nerve. The reëstablishment of the nervous influence by the cicatrix was observed on the fortieth day in the experiments on rabbits, on the thirty-first day in those on dogs, and on the twenty-fifth on fowls. In twenty experiments on rabbits the two ends of the sciatic nerve were not reunited, and the passage of the nervous influence by the cicatrix in these cases was not observed till after sixty days. The presence or absence of this influence was indicated by the excitation of the nerve, above the cicatrix, by means of a weak induction current or by mechanical excitation. In the experiments on rabbits, microscopical examination showed on the fortieth day in cases of suture of the nerve, and on the sixtieth day in those of simple section, bundles of amyelinic nervous fibres passing across the cicatrix from the central extremity of the nerve to its peripheral parts. In reference to the transplantation of nerves, Dr. Johnson has succeeded in inserting, in the deficient intervals of the sciatic nerve of two fowls, portions of the sciatic nerve of other fowls, and in the sciatic nerve of a third fowl a portion of the sciatic nerve of a rabbit. The first two fowls were killed at the end of twenty-eight days and thirty-four days respectively, and the third after twenty-three days. The portions of the transplanted nerve were perfectly grafted on the original nerve, but the nervous influence through the cicatrix did not exist in any of the cases. Microscopical examination exhibited a very evident contrast between the portion of the central nerve where the degeneration was but slight, the intermediate portion where the myeline was very much subdivided, and the peripheric portion where scarcely any traces of myeline were to be found.—*Medical Times and Gazette*, September 8, 1883.

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SATURDAY, SEPTEMBER 29, 1883.

IS EXTIRPATION OF THE CANCEROUS UTERUS A JUSTIFIABLE OPERATION?

At the recent meeting of the American Gynecological Society, held in this city, Dr. A. Reeves Jackson, of Chicago, read a paper bearing the above title, in which he endeavored to show that hysterectomy should be discarded from practice for the reasons that it is a highly dangerous procedure, and that it holds forth no reasonable hope for permanent relief. A full abstract of the paper and of the discussion it elicited, which we had the pleasure of hearing, will be found in last week's issue of The Medical News, from which it will be seen that Dr. Emmet, whose personal experience is limited to a single case of laparohysterectomy, endorsed the views entertained by Dr. Jackson, as did, also, Dr. Van de Warker, of Syracuse. Dr. Sutton, on the other hand, regarded colpohysterectomy as an operation full of promise, and would not hesitate to have it resorted to were a relative suffering from carcinoma. Dr. Palmer, of Cincinnati, had always declined to perform it; while Dr. Baker, of Boston, would limit total removal to those cases in which the disease begins in the cavity of the organ. Hence, the Society may be said to be opposed to the removal of a carcinomatous uterus.

During the past few months important contributions to the statistics and details of the operation from the pens of Sänger, of Leipsic, Schatz, of Rostock, Demons, of Bordeaux, and Schrœder, of Berlin, have been made to vol. xxi., 1883, *Archiv für Gynäkologie*, the *Archives Générales de Médecine*, for August, 1883, and the *British Medical Journal* for Sept. 15, 1883, in which the authors, in common with the majority of German surgeons, regard the procedure as an eminently rational one in an affection so surely lethal when left to itself as carcinoma, claiming for it no more nor less than is to be expected from the extirpation of the tongue, the testis, the rectum, the breast, or the thyroid gland, for cancer.

The objection urged against extirpation of the uterus by Dr. Jackson, that it is a highly dangerous operation, is open to criticism. It is dangerous, but the mortality depends upon the manner in which it is done. Laparohysterectomy, or Freund's operation, is a frightfully lethal procedure. Of 93 cases collated by Hegar and Kaltenbach, 63, or 67.7 per cent., proved fatal, and the death-rate does not appear to be diminished by increased experience, since of 106 cases, inclusive of those just referred to, of which we have a knowledge, 72, or 68 per cent., died. The primary risks are, therefore, so great that abdominal hysterectomy should be reserved for special cases. Vaginal hysterectomy, on the other hand, yields the most promising results. To the 133 operations, with 38 deaths, collated by Sänger, we have to add 34 additional ones, of which 9 are from the practice of Schatz, 4 from that of Shrœder, 3 from that of Olshausen, 2 each from that of Dudon and Howitz, and 1 each from that of De Vecchi, Novaro, Guarneri, Pawlik, Müller, Demons, Mandrillon, Tauffer, Holmer, Studsgaards, Leisrink, Calderini, Paggi, and Wile. Of the 167, 115 recovered, and 52, or 31.13 per cent., died, which is nearly as good a result as is shown by ovariotomy in the hands of American and European surgeons. Thus, of 5153 ovariotomies, tabulated by Agnew, 1502, or 29.13 per cent., perished. Like ovariotomy, vaginal extirpation is progressively improving in its death-rate. Thus of 52 examples collated by Haidlen, in 1881, 19, or 36.6 per cent., died. Of 81 analyzed by Czerny in 1882, 26, or 32.1 per cent., were fatal; while, as we have just seen, of 167 collated by us in 1883, 52, or 31.13 per cent., perished. In the hands of surgeons who have had the largest experience, the mortality has been still further reduced. Martin lost 8, or 26.6 per cent., of his 30 cases; Olshausen lost 7, or 28 per cent., out of 25 cases; and Schrœder lost 7, or 30 per cent., of his 23 cases, the 78 operations affording a mortality of 28.2 per cent. From this beginning, colpohysterectomy should be persevered in, with the hope that it will ultimately become a far more successful measure than it has proved to be up to the present date. With such flattering results, however, before us, we have no hesitation in taking issue with Dr. Jackson, and in declaring that vaginal extirpation of the uterus is not a highly dangerous operation, when the gravity of the disease for which it is performed is taken into consideration. When resorted to for other conditions than carcinoma, the success of the procedure is noteworthy. Thus of 13 operations for prolapse and benign tumors of the uterus, only 2, or 15.4 per cent., were fatal.

The second objection which Dr. Jackson adduces against hysterectomy, is that it does not cure the disease. Indeed, he does not appear to believe that a case of carcinoma was ever permanently relieved, as he says: "It is notorious that in almost all instances in which surgical operations have been done for the removal of cancers, they have been only of temporary benefit—if beneficial at all." The general surgeon could inform him that fifteen per cent. of carcinomata of the tongue, and nearly eleven per cent. of carcinomata of the breast, have been cured; and he should know that one of Freund's patients was free from recurrence for four years and five months after abdominal hysterectomy. The decision of this important question is not a matter of sentiment; it must rest upon a far larger experience, and a more rigid following up of each case. Of the final results of the vaginal operation, the information is meagre. In at least nineteen cases there was freedom from recurrence for periods varying from three to twenty-four months, two remaining well for three months; two for five months; five for six months; two for eight months; two for nine months; one for fifteen months; two for eighteen months; one for nineteen months; and two for twenty-four months. In at least fifteen instances there was recurrence in from four weeks to ten months, or in four months on an average, and death ensued, on an average, in fourteen months after the operation, so that life was prolonged even in these fatal cases.

Is it true, as Dr. Jackson states, that "when the diagnosis can be established there is no reasonable hope for a radical cure?" To this we answer emphatically, No, and our proof lies in the results of partial operations, which are notoriously far less successful than when the entire organ involved is extirpated. Thus, Pawlik, in Heft. 12, 1882, *Wiener Klinik*, has published the statistics of Prof. C. Braun's removal of the vaginal portion of the uterus, for carcinoma, with the galvanic cautery. Of 136 cases, 33 were living free from recurrence for periods varying from one to nineteen years and a half after the operation. Dr. Baker, of Boston, also, in the discussion on Dr. Jackson's paper, brought forward some pregnant facts bearing upon this point. By a very ingenious operation, which deserves general adoption, he has removed the entire supravaginal and infravaginal portions of the cervix, as well as from one-third to one-half of the body of the uterus, and subsequently seared the denuded surface with the thermo-cautery, 30 times, and 6 patients were living entirely free from disease five years subsequently. If such results are attainable from partial operations, what may not naturally be expected from complete extirpation performed through the vagina at an early stage of the disease, when irregular and climacteric hemorrhage is its first indication?

We regret to have to disagree with the learned members of the Society, but the importance of the subject demands that we should present the other side of the picture to our readers. Operations upon the uterus for carcinoma must be persisted in, and we are inclined to endorse the views of Sänger, who holds that partial operations on the cervix should be reserved for those cases of malignant papilloma, in which the growth projects into the vagina, that supravaginal amputation of the body of the organ, after laparotomy, should be limited to those cases in which the diseased organ cannot be removed through the vagina, and that vaginal hysterectomy should be the rule in all other examples of carcinoma.

THE TREATMENT OF TUBERCULOSIS BY ARSENIC.

THE use of arsenic in pulmonary consumption is not new, but we are inclined to believe that it has been too much ignored in recent years. Comparatively recently, BUCHNER called attention to it in a paper on the "Therapeutics and Prophylaxis of Phthisis," and still more recently KEMPNER and LINDNER have repeated his observations. The results of the latter are published in the *Deut. med. Woch.*, for August 22, and confirm those of his predecessors.

Tested upon well-marked cases with extended dulness and in some with well-marked cavities, Lindner noted that there was no essential alteration of the local condition, but a decidedly favorable influence was exerted upon the quantity and quality of the expectoration, which diminished to from one-fourth to one-half its original quantity, and from being purulent became more mucous and, in some instances, pure mucus. There was no influence upon the fever, or at least none which would justify the ascribing of an antipyretic property to arsenic, although, as a rule, the temperature was lowered, in one instance amounting to actual temporary apyrexia. The appetite was also decidedly increased, and with the increased ingestion of food came increased strength, so that the patients easily got out of bed, and remained for hours in the fresh air. Night-sweats were slowly influenced, and gradually disappeared. At the same time Lindner admits that these results were not permanent. He employed arsenic also in local tubercular affections, especially in tubercular disease of the bones and joints, in lupus, and lymphoma. Here, too, there was some increase of appetite ascribable to the drug, but there was no evident change in the local disease.

We agree with Buchner that partially satisfactory therapeutics are better than no therapeutics; and if arsenic will produce the results above claimed for it in consumption, let us by all means avail ourselves of its effects, and give our dying phthisical cases one more chance of prolonging the life which is seldom else than sweet, let its sufferings be what they may.

ACCIDENTS DURING CONVALESCENCE FROM TYPHOID FEVER.

M. Vulpian has recently reported in the *Revue de Médecine*, August, 1883, two very interesting cases of accidents occurring during convalescence from typhoid fever. One was an inflammation of the right crural artery, which occurred some days after convalescence had set in, in the case of a young man twenty-one years of age. There were pain, œdema, and bloody extravasation in the skin of the lower antero-internal part of the right thigh. The patient recovered ultimately.

The second case was one of atrophy of the right deltoid muscle, observed also during convalescence from typhoid fever of mild form, occurring in a young man sixteen years old. There was at no time previously any evidence of the involvement of the nervous centres, nor had he ever had an affection of the nervous system. This complication was also accompanied by intermittent pain in the right upper extremity. On the fourth day after the appearance of the pain, there was noted swelling of the right arm, which increased. These phenomena M. Vulpian immediately ascribed to some alteration in the nerve centres, a suspicion which was confirmed two days later by the incontestable presence of paralysis of the deltoid muscle and of the muscles of the right arm, accompanied by a diminution of muscular contractility, more marked in the deltoid. To these symptoms succeeded atrophy of the deltoid muscle. M. Vulpian ascribed the condition to a local myelitis, and believes that in such cases a predisposition — a vulnerability — must exist in the spinal cord, which may be engendered by the occupation of the patient, which in this instance was that of a store-boy, accustomed to carry heavy articles upon his right shoulder.

The report of these cases is interesting, and we present them to the attention of our readers for comparison with their own experience.

THE DIAGNOSTIC VALUE OF KOCH'S BACILLI.

Further evidence comes to us from Germany in favor of the diagnostic value of the bacillus tuberculosis in the shape of a lecture by Dr. Gessler before the Munich Medical Society, and published in the *Deutsch. med. Wochenschr.*, August 22. He concludes that with the demonstration of bacilli in the sputum the presence of tuberculosis is established; and that, should long-continued investigation fail to discover bacilli, the presence of tuberculosis is rendered highly improbable, but not excluded.

It is to be regretted that so little attempt has as yet been made by hospital physicians in this country to determine the important questions growing out of Koch's discovery. With the exception of Dr. Prudden's excellent paper, and Dr. Formad's incomplete researches, we are aware of no extended practical results published by Americans. That our physicians are ever ready to test measures of treatment, but seldom willing to undertake observations requiring time and patience, implies that our training in the direction of laboratory exercise has failed as yet to show the results we have a right to expect from it. Much has been done at home in the way of collecting and arranging the literature of other countries on the influence of minute organisms in disease. Who will be the first to show us some practical manipulative work on the subject?

THE RECENT OUTBREAK OF GLANDERS.

The serious outbreak of glanders which has occurred in a car stable at Newark, has necessitated the slaughter of about fifty horses, and the quarantine and frequent examination of the rest. It has afforded a rare opportunity of seeing the different phases of the disease, and the comparative relations and effects of farcy, which is viewed as a modified form of glanders, and will impart the disease. As it is claimed that the bacillus of farcy can be identified, it is time for close experimentation as to attenuation of virus. Dr. Meyrick, of the British war office, in an article in the September number of Fleming's *Veterinary Journal*, discusses hopefully the question of the curability of glanders, and of the application thereto of a vaccinating system. As it involves the lymphatics, the Schneiderian membrane, and all the nasal surfaces as well as the lungs, it has been considered an incurable disease. Its communicability to men and to animals, and the fact that horses having it are often continued at work, render the spread of the disease greatly to be feared.

The relative strength of the National Code and New Code adherents in New York City will be exhibited at the annual election of officers for the New York County Medical Society, to be held at the next monthly meeting, on October 29. Two straight-out tickets, representing the two parties, have been placed in nomination.

SOCIETY PROCEEDINGS.

AMERICAN GYNECOLOGICAL SOCIETY.

Eighth Annual Meeting, held in Philadelphia, September 18, 19, and 20, 1883.

(Specially reported for The Medical News.)

(*Concluded from page 332.*)

Thursday, September 20th, Third Day.

Morning Session.

After the adjournment of the business meeting, Dr. Henry F. Campbell, of Augusta, read a paper on

MENSTRUATION AFTER EXTIRPATION OF THE OVARIES,

in which he said: By general consent the influence of the ovaries in menstruation has long been recognized, and there is nothing in my remarks that would deprive them of their important influence over this function. Ever since the removal of diseased ovaries became of frequent occurrence, it has been found that menstruation often continues after their removal.

This has been variously attributed, first, to habit; second, to periodical plethora; and more recently, to the failure to remove that which has been recognized as the real inciter of the menstrual nisus, viz., the Fallopian tube. Not denying any of these theories, I shall present some considerations in regard to these phenomena, which I think have not yet been given their full weight.

The ovaries are unquestionably the ordinary exciters of menstruation, and we might reasonably expect that, on their removal, menstruation would be modified or arrested. But are they the only exciters to activity in the genital organs? We recognize the influence of the mammary gland over the organs of generation, and also the fact that mental conditions may act on these organs. The ovaries are under the influence of the nervous system, and after removal of the organs this influence may still be continued. In many instances, menstruation and uterine action generally have been excited by stimuli external to the ovaries.

Not many years ago, I had a remarkable case. A little girl, between the ages of eight and ten, was brought to me by her parents, with the statement that she had twice menstruated. In appearance she was entirely healthy. She was then in her third period. After repeated questioning, I was informed that five months ago she had had mumps. I immediately concluded that this probably had something to do with the irritation of the ovaries. I learned that there had been some tenderness in the ovarian region at the time she had the mumps, and on examination I found tenderness. The breasts were slightly enlarged. I did not examine the pudendum. The two former menstrual periods had come at irregular intervals. The third had appeared after an interval of twenty-one days. The discharge was not very great. I told the parents that in all probability there would be no return, and such was the case. At the proper age she developed into a young woman, menstruating at about the age of fifteen.

I had a second case, where another point was the source of irritation. It occurred in a colored girl, about seven years of age. This child had more decided indications of puberty. There were enlargement of the breasts and decided development of the external organs of generation. There had been three or four menstrual flows. The only way in which this could be accounted for, was by an abscess which she had on the mammary gland. After a time, the discharge gradually disappeared. This case would indicate that the irritation might proceed from some other point than the ovary. In this example, the ovaries were only one link, and not the primary link, in the chain of phenomena present.

Some time ago, Dr. Clark, of Mississippi, detailed to me a remarkable case. It was that of two sisters, one the wife of a farmer living in the country, somewhat depressed in financial matters, but blessed with a large number of children. The other was married to a gentleman living in the city; she was in poor health and had suffered from amenorrhœa for a long time, but was very desirous of having children. This lady made it a rule to be with her sister during each of her numerous confinements. On one of these occasions, while nursing the baby she put it to her breast. This she repeated; in the course of about six weeks, menstruation appeared and milk developed in the breasts. She became healthier, returned home, and soon became pregnant.

I also know of a grandmother, who, by nursing the child, developed milk in the breasts, and nourished the child for a number of months. Do we not see from these various phenomena that there may be some other influence beside that of the ovaries and Fallopian tube?

The proposition to which I would call the attention of the Fellows is this: We know that the hypogastric plexus and uterine nerves must have a centric attachment somewhere. Anatomy and reason teach us that this centre ought to be about the lumbar or crural bulb, in the lower part of the spinal marrow. This bulb is an important centre in the whole lower part of the body. It receives the sensitive and motor nerves from this region. Frequently, after a limb is cut off, pains will be referred to the amputated portion. In a similar way, may it not be that there resides in the nerve-centres presiding over the function of menstruation an influence which may continue to act for a time after the removal of the ovaries? One objection that will be made will be that castration nullifies sexuality. But it is now well agreed that in the full-grown animal it does not entirely do so. If the operation is done at a period when the organs and nerve-centres are undeveloped, it does destroy sexuality. Ovariotomy is performed when the ovaries are well developed, often after they have, for a long time, been the seat of constant irritation. The controlling nerve-centre has acquired a peculiar sensitiveness, and after the removal of the ovaries the continuance of this reflex irritation causes congestion of the organ, and we have menstruation resulting, although the common exciter, which I admit is the ovaries, has been removed.

Dr. William Goodell, of Philadelphia, said: I am not inclined to accept Dr. Campbell's assertion that menstruation occurs very commonly after removal of the ovaries. In my experience it is very rare; but I am inclined to accept his view that it may be due to irritation of the lumbar bulb. I have never removed both ovaries without having a spurious menstruation appear in about five days, and I am disposed to attribute this to the irritation of the nerves included by the ligatures.

I have had but two cases in which menstruation returned after the removal of the ovaries. One was in a case of supposed fibroid tumor of the womb. The girl was bleeding to death, and about a year ago I removed both ovaries. For four or five months she went without menstruating, and gained flesh and strength. After a time, menstruation returned and became profuse. Making a careful examination of the uterus to decide whether or not it would be advisable to remove it, I concluded that there was a chance for enucleating the tumor. The introduction of the forceps for this purpose, brought away a new tissue which proved to be sarcoma. This bleeding was of course not menstruation, and this case may, therefore, be thrown out.

The second case was one in which both ovaries and Fallopian tubes were carefully removed. The lady has menstruated regularly ever since. I can only account for it on the supposition that either abnormally located ovarian tissue has been left behind, or that time enough has not yet elapsed to break up the habit of menstruation.

A liability to leave some of the ovarian tissue behind, led me to give up the vaginal for the abdominal operation. Once, in operating by the vagina, I had removed one ovary and had seized the second and was about to transfix the pedicle when the ovary tore away from the forceps, leaving a large piece in the grasp of the instrument. I was unable to secure the stump. Menstruation continued profusely, and, finally, I was compelled to perform the suprapubic operation. The portion of ovary that had been left was not larger than a bean. I am sorry to say that this case ended fatally, so that it was lost to science.

I am disposed to think that in some operations, followed by no break in menstruation, a little ovarian stroma was left behind. For in performing oöphorectomy, I often find it difficult to get a pedicle sufficiently long to avoid the ovarian structure. On several occasions, knowing that I had left at least a portion of the outer tunic of the organ, I have gone over the stump and teased away with forceps the supposed ovarian tissue.

Dr. Campbell's paper would have been of more value, had he given us some statistics to base his data on.

DR. EMMET, of New York, said that, without referring to the views advanced in the paper just read, he desired to put on record a case on which he operated about eighteen months ago, removing both ovaries. One was very large, and the other about the size of a goose-egg. He certainly removed the whole Fallopian tube with the larger tumor, and a portion of it with the smaller. When last heard from, she had menstruated for the thirteenth time, the periods having been regular. Before the operation, menstruation had been excessive, but since then it has been natural, lasting three days.

DR. GARRIGUES, of New York, said that in such a case as Dr. Emmet's, it must be taken into consideration that in exceptional instances, there are three ovaries. There is a very interesting instance of a young lady, unmarried, in whom both ovaries were extirpated. She subsequently married, and a year later was delivered of a living child; this, of course, can only be accounted for on the supposition that there were three ovaries.

DR. T. G. THOMAS, of New York, said: I presume that the main point of Dr. Campbell's paper is that there is in some part of the spinal cord, perhaps in this lumbar or crural bulb, a centre which has charge of the function of menstruation. Upon that point, I have had no experience, but I have listened with interest to the suggestions that have been made.

I have removed both ovaries between fifty and sixty times, many of the operations having been done for disease. The impression which I have formed from a careful study of the after-history of those cases which I could keep under observation, is that, whereas, while the ovaries are present, menstruation is the rule, when the ovaries are removed, menstruation is the exception. We know that many organs when removed from the direct influence of the nervous system, will maintain their ordinary functions for some time. A striking example of this is obtained by removing the sturgeon's heart and suspending it by a string. The heart will continue to beat until the muscle becomes so dry that it can be heard to rustle at each contraction.

I believe that many cases of menstruation after removal of the ovaries, are cases of metrostaxis. The uterus has been in the habit of menstruating, and even after the removal of the great factors, the organ continues its function. I have never met such a case as that described by Dr. Emmet. Almost invariably the bleeding has been due to a metrostaxis, which gradually diminishes and finally disappears.

In my experience with Battey's operation the rule is that menstruation ceases after the operation. Sometimes menstruation appears for five or six months, but it is irregular, and is a metrostaxis.

I have performed Tait's operation ten or twelve times, but the result has been the same as with Battey's. The difference that I should make is that, whereas Battey's operation consists chiefly in removing the ovaries, Tait's consists chiefly in removing the Fallopian tubes, and secondarily the ovaries.

There are a number of cases on record in which impregnation has taken place after removal of both ovaries, and a living child has been born. The following case probably affords an explanation of this fact. Six months ago I removed an ovarian tumor weighing forty pounds. The ovary was distinctly seen spread out over the tumor. The second ovary was as large as a duck's egg, and was also removed. My assistant then called attention to a third ovary, which was not quite so large as the normal ovary. There were two or three little cysts on its surface, which I punctured with a needle, allowing the ovary to remain. I have not since heard from the patient.

Dr. Campbell's suggestions are very good, but my increasing experience leads me to believe that the older view, that ovulation is the main factor in the production of menstruation, is the correct one. I believe that Tait's opinion that the Fallopian tubes are the exciters of menstruation, results from the fact that by his operation the ovaries are more thoroughly removed. My rule in operating is to not interfere with the Fallopian tubes if I can avoid it. If they are diseased, I remove them.

DR. BYFORD, of Chicago, said that the frequency with which menstruation occurs after the removal of the ovaries depends very much upon what is considered menstruation. If it is held that menstruation is complete only when ovulation takes place, menstruation is rare, and can only follow when some of the ovarian structure has been left behind. If menstruation is considered to be simply a discharge of blood, then it occurs in many cases. Almost invariably, if the periods of recurrence are traced, it will be found that it is simply a metrorrhagia, and not menstruation.

I have removed both ovaries in about seventeen cases, and with the exception mentioned by Dr. Goodell, that the women have a show soon after the operation, I have had but one case in which anything like a periodical flow took place. I am satisfied that there is no regular interval of twenty-eight days between the periods, and that they are due to exciting causes which might in any other woman produce metrorrhagia. There are none of the accompanying symptoms of menstruation. I have had another case, however, which, while it has no discharge, has all the other symptoms of menstruation. She has backache, pains in the limbs, etc., every twenty-eight days, showing that there is a continuance of the influence which produces ovulation. I think that sometimes some of the ovarian structure is left behind.

So far as my observation and reading go, they lead me to coincide with Dr. Thomas in thinking that the theory of ovulation is not disproved.

DR. M. D. MANN, of Buffalo, in discussing the paper, said that the apparent menstruation may be the result of disease of the womb. In one case in which I removed not only both ovaries, but also the womb as far as the internal os, there was a decided flow. It was not regular, and finally became so free that a tampon was required. On examining the patient I found in the anterior wall of the vagina and the remaining portion of the cervix a distinct epithelioma. In this way some of the cases may be explained. We should leave out of consideration all those cases which have not been under careful observation throughout the whole period during which menstruation is said to have occurred.

Dr. Campbell, in closing the discussion, said: It has been said that often some of the ovarian tissue is left behind. In one of the cases operated on by Dr. Battey in my presence, there could be no doubt that all of both ovaries had been removed. In that patient menstruation continued and extended to the amount of actual hemorrhage. There may be, as has been suggested, a third ovary, but in a long experience as a dissector I have never seen a case of this kind. It is possible that Dr. Tait, in removing the Fallopian tube, removes the nerves which carry the influence producing menstruation.

The experiment with the sturgeon's heart may be explained in another way. It has been proved that the heart has within itself certain nerve-centres, which will cause it to beat after the connection with the central nervous system is severed.

I think that we may say, then, that if there is a third ovary we may expect menstruation; that if all of the ovarian structure is not removed, we may expect menstruation; and that menstruation does sometimes occur after the removal of all of the ovarian structure. May not these cases be due to influences from the nervous system?

Afternoon Session.

Dr. William H. Byford, of Chicago, next read a paper entitled

REMARKS ON CHRONIC ABSCESS OF THE PELVIS.

He said that collections of pus in the pelvis may take place in many situations, the most common being between the folds of the broad ligament. Isolated collections may occur between the bladder and rectum, and between the vagina and rectum. They may be found sometimes in the peritoneal cul-de-sac behind the uterus in the peritoneal cavity, and rarely in the substance of organs as the cervix or ovaries. In some instances, pus exists in several localities, the most common of which are cases in which pus exists in the broad ligament and in the retro-uterine pouch of the peritoneum. The cavity in the broad ligament is usually unilocular, but not infrequently there are two or three loculi.

The progress of suppuration is modified according to the tissue in which it occurs. When an abscess occurs in the cellular tissue of the broad ligament, it is likely to discharge freely, because it is surrounded by elastic fibrous tissue exerting pressure. The cavity is more easily obliterated for the same reason. When the opening is near the vagina, it is usually direct and ample. When the opening is distant, the canal may be tortuous. When the opening is into the rectum, the contraction of the muscular fibres occasionally closes the orifice. When the rectum is filled with feces, the same thing takes place. When the abscess is in the retro-uterine pouch of the peritoneum, the discharge is imperfect, because there is no fibrous involucrum and compression does not take place.

The obliteration of the cavity of an abscess takes place in two ways: First, by contraction of its walls; secondly, by granulation from its internal surface. In the cellular phlegmon these two act together. In the serous abscess the granulation process is almost the only one. In an abscess which heals by granulation, the discharge continues until the cavity is obliterated. When in consequence of an impediment the cavity persists, the granular surfaces continue to pour forth pus indefinitely. At first, the pus is laudable, but later there may be an admixture of serum and sometimes of blood. At times it becomes thin, ichorous, acrid, and fetid. Later the pus-globules may diminish in number and finally disappear. When an abscess becomes chronic, and pus is not discharged, it indicates an alteration of the cyst. Gradually the pyogenic lining of the abscess is converted into a cicatricial membrane. At last the granular character of the internal surface is lost, and no more pus is produced. This shining cicatricial membrane possesses the property of exosmosis and endosmosis.

In a paper by Dr. H. Bixley, two cases are recorded in which these changes took place. I am familiar with the progress of these cases. The first was that of Mrs. H. When I first saw her, she had a hæmatocele. The effusion was succeeded by inflammation, which, although not great, persisted until she left for the east. During the latter part of the first year, symptoms of suppuration were present, but before leaving the west she had improved, and for some time there had been no symptoms denoting the formation of pus. There had, without doubt, been a collection of blood, the sac and surrounding tissue had undergone inflammation and an abscess, which had not found its way out, had formed.

About eight years after the accident occurred, Drs. Mack and Bixley drew off three pints of straw-colored serum. The color, consistency, and microscopical character were such as would be expected after the processes which are now known to take place in these collections. I examined this patient one year ago; the change of life had taken place, and excepting a little sensitiveness in the genital organs, there was no apparent lesion. I think that in this case the internal surface became cicatrized, serum was thrown out, and the pus and remaining broken-down blood-clots were absorbed.

Dr. Bixley's second case was similar, and ran a similar course. I first saw it in 1865: it presented the history of hæmatocele followed by inflammation. The peritonitis, which was moderately acute, subsided in a few weeks; in less than a year she was in the enjoyment of good health, and so remained.

The lining wall of a chronic abscess does not completely undergo the changes so described. Masses of granulation from one-twentieth to one-half an inch long often spring from it. I believe that they depend upon circumstances of a peculiar character existing only in certain cases, and that they may exist for an indefinite time and degree. In all the instances which I have seen, they have been friable and easily broken, not firm enough to be considered fibrinous. They are fungous and easily removed with the finger or dull curette. As the above changes take place in the lining of the cavity, a large portion of the inflammatory deposit external to the abscess is absorbed, and finally we have an encysted cystic tumor.

With these remarks in reference to the changes which take place in the lining membrane, I shall proceed to speak of the treatment. If the abscess is recent and the opening into the vagina free, it will require but a short time for the obliteration of the cavity if there is any connective tissue in the walls. It often happens that the abscess opens into the bladder or rectum, and the discharge is imperfect; in such cases there is a strong tendency for the abscess to continue to refill. If the case is seen before the opening has occurred, and the abscess is opened through the vagina, perforation of the bladder or rectum may still take place.

When perforation takes place into the rectum or bladder, I pursue one of three courses in cases where the abscess is at the middle point between being acute and being chronic. First, I pass a bent probe through the bladder or rectum into the cavity of the abscess, turn the point toward the vagina, and press downward until it becomes perceptible in the vagina. An incision is then made upon the end of the probe. The opening should be free enough to receive two or three fingers. This gives a free outlet to the pus, and often will be sufficient. If not, a drainage-tube may be introduced, and daily injections of water will finish the cure.

The second and next best method is to use the aspirator through the vagina. After withdrawing some of the fluid, to make sure that the needle is in the cavity, open the abscess from the vagina in the same manner as before.

The third method consists in finding the opening in the rectum or bladder and enlarging it sufficiently to permit the free discharge of pus and the washing out of the cavity.

When the abscess has become chronic, and there are granular vegetations on the inner surface, I employ scraping with the finger or dull curette, drainage, and the daily ablution of the cavity with disinfectant solutions. If the masses of redundant granulations are not removed, the pyæmic fever will continue. If we depend on drainage, they will fall off slowly, and will be more or less decomposed, giving a strong odor. If they are removed with the curette and washed out of the cavity, the bad odor will at once disappear. There is no danger in scraping with the finger or a dull instrument, for in these old cavities the walls are thick and quite resistant.

I have here the notes of a case reported by Dr. Nelson, in which this practice was entirely successful. The patient was Mrs. F., aged twenty-four, married, but childless. She was a sewing woman, working a machine. She had had previous attacks of peritonitis. The last attack was a severe one. On consulting a physician, she was told that she had a cancer. Early in January, 1877, Dr. B. saw the case and found an opening in the vagina from which pus escaped. The opening was in the antero-lateral wall of the vagina, and was readily found and dilated by the fingers. The cavity was then washed out. Later a larger abscess was found behind the womb opening into the left posterior wall of the vagina. This canal was tortuous. The opening was dilated until two fingers could be introduced. The wall of the abscess was studded with granulations, some of which were an inch in length. These were scraped off with the finger and the cavity washed out. The walls of the abscess were so thick that they did not collapse. The patient kept the cavity washed out with carbolized water and made a rapid recovery.

When the wall of the abscess has been converted into cicatricial tissue, it will only be necessary to keep the cyst open, as it will soon be obliterated by contraction.

When suppuration occurs early in hæmatocele, simple puncture is not enough, the cavity must be scraped, drained, and washed out. It is necessary to keep up the latter process for a long time. The scraping is required to remove the clots.

Mrs. W. was admitted June, 1882, to the Hospital for Women and Children, Chicago. In the retro-uterine pouch, and extending above the brim of the pelvis, was detected obscure fluctuation. The patient was emaciated and presented symptoms of hectic fever. The diagnosis of suppurative hæmatocele was made. The abscess was opened by a free incision, and the cavity imperfectly washed out. The symptoms were mitigated, but were still severe. Later the opening was enlarged to admit the finger, and a digital examination disclosed a number of clots, in process of decomposition, tightly adherent to the wall of the cavity. Many smooth spots were noticeable, showing that glazing had begun. With considerable difficulty all the clots were scraped away. A large drainage-tube was introduced, and the cavity washed out with carbolized water twice a day. The offensive odor and the symptoms of sepsis subsided, and the patient made an uninterrupted recovery.

In conclusion, let me give the following summary of my views: I do not claim to have presented anything new or original. I look upon the inner surface of an abscess as being similar in structure to the surface of an external ulcer. It is covered with the same kind of granulations, producing pus. These are sometimes exuberant, forming masses similar to, but larger than occur in external ulceration. They may give rise to ichorous pus and blood, or produce laudable pus. As the inflammation of the surrounding tissue subsides and the exudation is absorbed, the granulations disappear in cicatrization, the pus is not increased in quantity, serum is mixed with the pus, the pus-plobules break down and are absorbed, and the cavity contains nothing but simple serum. This process finished, there results an encysted tumor of the pelvis.

Dr. T. G. Thomas, of New York, in discussing the paper, said that one of the questions which are constantly occurring in our department of medicine is this—the necessity for always searching for and opening these abscesses. Some years ago Dr. Brittle brought this subject before us, in a paper which I thought might be very dangerous, the Doctor taking the ground that the abscess should be sought for and opened. More recently Dr. Mundé advocated the use of the aspirator. More recently still, Dr. Lyman read a paper to the same effect. There is no more dangerous practice than that of seeking for these abscesses when high up in the broad ligament, when in Douglas' pouch, or when in the retro-uterine areolar tissue, unless we are sure that there is pus, and that we can reach it. When we can ascertain, by conjoined manipulation, that there is pus, and we know where to seek for it, then, and only then, should this exploration be made.

Dr. Byford's second method of treatment is by the aspirator, followed by the knife. I have employed the aspirator only as a means of diagnosis. The method that I like best is by the use of the exploring needle passed upward until it reaches the cavity of the abscess, as shown by the escape of pus along the groove. A sharp-pointed curved bistoury is then passed along the groove of the needle until the abscess is reached and a free incision is made. I use Sim's long knife, cutting out on both sides. I have found it difficult to keep these abscesses open. In order to do this, I use a glass drainage-tube furnished with a flange; both the tube and the flange are perforated with small holes. I carry this into the abscess and sew the flange to the vagina with silver wire. In this way injections can be readily employed.

When the abscess is large, and a sufficient opening cannot be made, I stuff the cavity with tow which has been saturated with iodoform. This is renewed every twenty-four hours until the cure is complete. I have used injections of carbolic acid and iodoform.

There is a class of cases in which the whole areolar tissue is occupied by multilocular abscess. The woman has hectic, and looks like a patient in the last stage of pulmonary consumption. On examining by the vagina, the tissues feel like plaster of Paris. These cases are sure to end fatally unless relieved by surgery. I have adopted the method of cutting along Poupart's ligament, reaching the pelvis from above and opening the abscess with the finger. If possible, I make a counter-opening below. The abscess is then stuffed with tow saturated with iodoform, as before described. The abscess is kept perfectly clean.

Dr. William Goodell, of Philadelphia, said: Dr. Byford's recommendation of the use of the curette is wholly novel to me, but I think that it would be an admirable method. The very great majority of cases which consult me I do not see *ab initio*. They present themselves after a number of fistulous tracks have formed, and often the woman has been greatly reduced in strength and flesh.

My method of operating in these cases is as follows: If there is an opening from above the pubes, I pass in the uterine sound and try to find some point in the vagina where the tip of the instrument can be felt. If it can be felt, I cut down upon it and put in a drainage-tube. I always inject these fistulous tracts with potassium permanganate or carbolic acid. Occasionally I have tried constant irrigation, with excellent effect. On several occasions I have treated these abscesses by opening them from above the pubes, and putting in Keith's glass drainage-tube. The aspirator I use in preference to the knife, when the intervening tissue between the vagina and abscess is thick. I also use it in encysted abscesses of the broad ligament, which often are partly movable. It sometimes disappoints me, but, on the other hand, I have had perfect relief and complete success from one aspiration.

About six months ago, I performed oöphorectomy in a lady who had recurring attacks of pelvic peritonitis and peritonitis at every menstrual period. My object was to stop menstruation and prevent the tendency to inflammation. Since then the patient has greatly improved; but two small abscesses have formed.

With reference to the cases alluded to by Dr. Thomas, in which the patient has run into a condition of great emaciation, I have one under my care at present. I am glad of the light which Dr. Thomas has given me, but I am afraid that my patient is too exhausted to allow of the carrying out of the treatment that he has suggested. She has no fever or chills, but there are great prostration and emaciation, and I would not deem it justifiable to make the suprapubic incision in such a case.

Dr. Thomas, in reply to Dr. Goodell, said that he looked upon the resort as a desperate one, but regarded the condition of the patient as more desperate. He would be unwilling to let a patient die without giving her the benefit of the operation. He would consider it a hazardous proceeding in the case which Dr. Goodell described, and would resort to it only when he felt that it was the last hope that the patient had.

Dr. R. S. Sutton, of Pittsburg, said that in Esmarch's clinic at Kiel, he saw him scraping out abscesses with curettes made especially for the purpose. He calls them aseptic curettes. They are made of one piece, so that there are no crevices in which dirt may collect. He removed everything that he could find from the abscess. He saw no abscesses in females in his wards, but saw pelvic abscesses in the male. He also saw two cases in which Esmarch had passed a rubber tube, three yards long, through the pelvis with one end in a reservoir of carbolized water, and the other end in a vessel to receive the drainage. He thought that the treatment of chronic abscesses by the curette is the established treatment in Esmarch's clinic, and that he is the exponent of the surgical knowledge of Europe.

Dr. Henry F. Campbell, of Augusta, said: I have never used the curette. I keep these abscesses clean by syringing them with water, beginning with tepid water, and gradually allowing it to become colder. I stuff them, but not entirely full, with soft linen. The process of granulation is stimulated in this manner.

I regard the constitutional treatment as very important. I wish to call particular attention to the value of the tartrate of iron and potassium. It lessens purulent formation, and favors the development of healthy granulations.

Dr. Byford, indorsing the discussion, said that it was not his intention to write anything like a special treatise on the subject of pelvic abscess, but only to call attention to a few points in connection with the treatment of some of the changes which take place in the lining membrane. Dr. Thomas has alluded to the danger of producing acute inflammation in searching for the abscess; I did not have such cases in view. At the meeting of the American Medical Association, I presented a paper on that subject. In the old abscess there is not much danger in searching for it, and treating it as I have described.

The last paper read was by Dr. George J. Engelmann, of St. Louis, and was entitled

ERGOT: THE USE AND ABUSE OF THIS DANGEROUS DRUG,

in which he said that he considered the use of the drug entirely unnecessary in the pregnant woman. The only condition in which it would be of service was in post-partum hemorrhage, and then no one would employ it, as it was so slow, and much better means were at hand. He would limit its use to the non-pregnant womb. If it were allowable at any stage of labor, it was in the third stage, but even there it might do harm by causing incarceration of the placenta. The accidents, which may result from the use of ergot in labor are rupture of the uterus, laceration of the cervix, laceration of the perineum, and other injuries to the utero-vaginal tract, and injuries to the child. It should not be used in abortion. He had seen two deaths resulting from the use of ergot and a number of injuries.

Dr. J. T. Johnson, of Washington, did not think that ergot was used so frequently as Dr. Engelmann's paper would indicate. He had, at a former meeting, read a paper in which he took similar grounds, but in the discussion of his paper, Dr. Barker drew attention to the fact that ergot does considerable good in cases where there is a hemorrhagic tendency, and where chloroform has been administered.

Dr. Henry F. Campbell said: I use ergot almost invariably in my obstetric practice. I never give the drug until the mouth of the uterus is well dilated, and hardly ever until after the delivery of the child; but I always give it afterwards to favor the expulsion of the placenta, the contraction of the womb and the removal of clots. In 1836-37, Dr. Milton Anthony published a series of articles in the *Southern Medical and Surgical Journal*, in which he clearly recognized the value and the dangers of the remedy. I never use it to cure post-partum hemorrhage, but it is a powerful agent in preventing hemorrhage.

Dr. Albert H. Smith, of Philadelphia, said: I agree entirely with Dr. Englemann. I believe ergot is never needed, is always capable of doing harm, and often does harm. There is nothing more important in the process of parturition for the welfare of the mother and child, than the intermittency of the pains. Ergot produces a tetanic contraction. There are circumstances where ergot might not do absolute harm in the first stage of labor. These are cases in which we know from previous experience that there is no obstruction in the pelvic canal, but we can never be positive on this point, for while one labor may be easy, the next may be difficult. In the second stage we never have a right to give ergot, for we have in the forceps a much better method of terminating labor. In the third stage, while its use may not be so reprehensible, there are very few cases in which it can be useful. I have seen the uterus thrown into such a state of contraction by the use of ergot, that ether and the injection of opium into the bowel failed to relieve it.

We have been told that ergot is useful in counteracting the effects of chloroform. I have used chloroform for eight years, and have rarely seen its use attended with relaxation. After ether relaxation is often met with; chloroform can be used in much smaller quantities than ether. I have seen less need for ergot after chloroform than after ether.

Dr. Elwood Wilson, of Philadelphia, in discussing the paper said: I formerly used chloroform in labor, but its tendency to favor relaxation and post-partum hemorrhage caused me to abandon it. I have seen the same thing after the long-continued and excessive use of ether. I am astonished to hear it said that ergot should never be given to the pregnant woman. I doubt if any man would approach a case of placenta prævia without resorting to the use of ergot. I consider ergot of immense benefit in post-partum hemorrhage. The difficulty is that in many cases it is given in too large doses, and at too late a period.

I believe that the judicious use of ergot in the third stage of labor is very important. I think that a half a drachm of the fluid extract of ergot, administered after the death of the child, will often result in the expulsion of the placenta and the tonic contraction of the uterus.

During my whole lifetime I have been in the habit of using ergot in abortion. I have only seen one death after abortion, and that was not due to the drug.

Dr. Englemann.—I may have been misunderstood. I believe that ergot is a powerful stimulant of uterine contractions, but I think that we have other and better means of obtaining the same end.

The paper of **Dr. James R. Chadwick**, of Boston, entitled, *A Theory to Explain the Relaxation of the Vagina and Perineum During Labor*, was read by title and ordered to be printed in the *Transactions*.

THANKS TO THE EX-SECRETARY AND EX-TREASURER.

Dr. Albert H. Smith read a series of resolutions expressing the gratitude of the Association to Dr. James R. Chadwick for the faithful manner in which he had performed the duties of secretary.

Dr. William Goodell was requested to draw up a series of resolutions expressing the obligation which the Association was under to Dr. Mundé for the manner in which he had served as treasurer.

The discussion of Dr. C. D. Palmer's paper on *Some Points Connected with the Subject of Dysmenorrhœa*, which had been postponed until the end of the session, was closed by a few remarks from Dr. Palmer.

Dr. Albert H. Smith, the **President-elect**, was now called to the chair and made a brief address.

The meeting then adjourned.

THE WISCONSIN STATE MEDICAL SOCIETY.

Adjourned Meeting, held at Milwaukee, September 4th, 5th, and 6th, 1883.

(Specially reported for The Medical News.)

Tuesday, September 4th, First Day.

The State Medical Society of Wisconsin held an adjourned meeting in the city of Milwaukee on the 4th, 5th, and 6th of September, this meeting, for all business purposes, taking the place of the thirty-seventh regular annual session.

The attendance throughout was very good, and, to more than the usual extent, the time of the meetings was spent in discussions rather than in the reading of laboriously written papers.

The President of the Society, Dr. T. P. Russell, of Oshkosh, being absent, no formal presidential address was delivered, but the Society was very acceptably presided over by the **Vice-President, Dr. D. Mason**, of Milwaukee.

The opening formalities and the report of the Committee of Arrangements having consumed but little time, the Society proceeded at once to business, which was opened by the reading of the

REPORT ON THE PRACTICE OF MEDICINE,

by **Dr. J. S. Walbridge**, Chairman of the Committee. The paper pointed out that the general practitioner of medicine must of necessity work chiefly in the direction of the application of remedies to particular diseases, having few facilities for the finer investigations of physiology or pathology, while the effects of therapeutic agents are matters of daily observation, and the study of these effects his highest duty. The antipyretic treatment of fevers was then dwelt upon at length, and the claim was made that by it the mortality from fevers has been very largely reduced, and many severe and dangerous complications and sequelæ avoided. Quinine and the application of cold water are the chief antipyretics made use of in this country, the sponge-bath being highly commended. The defects of clinical thermometers were pointed out, and a picture drawn of the weary description of continued fevers which was given before the thermometer was used.

The character of the fevers of the Northwest was discussed at some length, whether these were typhoid, typho-malarial, or simple remittent, the conclusion being that they were chiefly of malarial origin, even though there may be intestinal hemorrhage, and post-mortem cases may reveal softened or disintegrated intestinal mucous membrane, or even some form of ulceration of Peyer's patches.

Of recent advances in medicine, those attracting the most attention are in the field of microscopical research, the relation of micro-organisms to disease being the most startling and the most important question now before the medical profession. If it is established that disease is the result of the invasion of the system by bacteria, our therapeutics must conform to that idea, and preventive medicine assumes vastly increased importance, and the study of infectious diseases will be placed upon a scientific basis.

In answer to questions, **Dr. Walbridge** stated that he gave as an antipyretic dose of quinine from twenty to forty grains; had given as high as fifty-five grains—seldom more than thirty to forty grains. He never had seen any bad effects from it, and had often been surprised at the lack of cinchonism from such doses. He generally gave it in the form of a bolus, at one, two, or three doses, and on alternate days, using cold sponging during the intervening day. The reduction of temperature following these doses of quinine is generally one to three degrees, and the effect continues from twelve to twenty-four hours. If, after a few days, the quinine does not have the desired effect, he stops its use, and treats the case expectantly until later, when quinine is again tried. He did not consider antipyretic treatment necessary unless the temperature is over 103°, but with this temperature he would use it in fever of any type.

Dr. Senn referred to the use of kairin as one of the most valuable of antipyretics, the chief objection to its common use being that it is very expensive. He said the temperature in fevers is reduced in one of two ways—either by the direct abstraction of heat, or by checking tissue-metamorphosis. Quinine, salicylic acid, etc., belong to this later class. Koch has demonstrated that bacilli or micrococci exert their baneful influence by changing the character of the white-blood corpuscles, increasing their power of adhesion, and inducing embolism and metastatic abscesses. He believes that typhoid fever is common, and would always put down any case where there is any change in Peyer's patches as genuine typhoid. He believes that there is more danger of mistaking typhoid fever for fever of malarial type than of mistaking the malarial for typhoid. Typhoid is more common in children than malarial.

DR. MANLEY had given a boy of thirteen, with initial symptoms of violent scarlet fever, twenty grains of quinine at night, and twenty grains more in the morning, with the effect of aborting the fever.

DR. STANSBURY agreed with Dr. Senn in classing our common continued fevers as typhoid, though some of them, especially the milder cases, are more or less deficient in the characteristic symptoms of true typhoid. He believed that an expectant mode of treatment produced better results and a smaller death-rate than are found where large doses of quinine are given. He believed that the opinion that these cases are not malarial is sustained by the fact that quinine has little effect in shortening their duration.

DR. WENZEL stated that in this latitude there is but little malaria, the summer heat not being sufficiently powerful or prolonged for the evolution of the malarial germs. The fevers met with are a low, continued fever or a typhoid, and quinine does little good. If they were of malarial origin, quinine would break them up. He expressed doubt of the safety of forty to fifty-five grain doses of quinine. He thinks such doses may cause amaurosis or deafness, or even death from paralysis of the heart. He thought that better results would follow small, frequently repeated doses. He regarded digitalis as the best antipyretic and heart tonic we have in dangerous cases of typhoid or continued fever.

DR. STEELE expressed the opinion that typhoid fever is a *very* rare disease in his section of the State, though there may be a tendency to its increase by the changes incident to increased population and the climatic changes which come from greater cultivation of the soil. The present type of fevers in Northern Wisconsin is of malarial origin, and can frequently be broken up promptly by the daily administration of ten to fifteen grains of quinine, for a few days, in the early stages.

DR. DAY, referring to what had been said about cold sponging, said that he had found the use of warm or hot water preferable, there being no unpleasant reaction following, or congestion, as was liable to be the case after the use of cold water.

DR. FRENCH doubted if cold sponging affects the temperature materially; but he has reduced temperature from 105° to 103° by an hour's bath of cold water, and the temperature did not again rise to its former height. He agrees with Dr. Walbridge as to the infrequency of typhoid as compared with malarial forms of fever.

WEDNESDAY, SEPTEMBER 5TH, SECOND DAY.

MORNING SESSION.

DR. BARNETT, reopening the

DISCUSSION OF FEVER,

said that, while agreeing with Dr. Walbridge in the belief that remittent fevers were of more frequent occurrence than typhoid, he could not agree with him in the belief that typhoid fever was seldom or never met with, nor could he agree with those who would class all or most of our continued fevers as typhoid. He would be unwilling to give much weight to the influence of antipyretics or the rate of mortality in making a diagnosis.

DR. DAVIES expressed the belief that the type of fever is changing. Typhoid fever, which was prevalent fifteen years ago in his section, is now seldom met with, and the remittent type of fever generally predominates. He gives quinine in such cases, but not with the liberal hand mentioned by others as a rule, though, during the remission, he would give in the aggregate as much. He prefers not to give it in doses of over five to ten grains.

DR. BRETT said that at Green Bay, in eleven years, he had never seen but one typical case of malarial fever, but had seen many cases with all the characteristic symptoms of typhoid.

DR. DODSON found in his practice many typical cases of typhoid fever. He uses quinine in antipyretic doses of forty-five to sixty grains, given in two doses one-half hour apart, and repeats this dose on the second day if the fever rises to the point of danger. If it does not, he depends on sponging. He believes nearly all our diseases are modified by malarial influence.

DR. MANLEY thought that we very often do not find well-marked typical cases of disease, but he believes we frequently find true typhoid fever. He has had several cases which he believes to have been caused by infected water, and believes this condition of the water-supply will often be found where typhoid fever prevails.

DR. HOEGH, in fourteen years at La Crosse, had never seen a distinct case of remittent fever, but had seen numerous cases of typical typhoid, identical with those seen in Norway, where there is no malaria, the identity being verified by post-mortem results. He regards the disease as certainly contagious, and has found but limited benefit in it from the use of quinine.

DR. MANN read a paper, giving a report of a case of

PHLEGMASIA ALBA DOLENS FOLLOWING TYPHOID FEVER,

as an after-result of which one leg had been enormously swollen its entire length, with extreme pain and sensitiveness, most marked over the course of the femoral vein, the symptoms being apparently identical with those of phlegmasia alba dolens. The case had been a protracted one, the man having, during his sickness, had pneumonia also. It resulted in recovery.

DR. BARNETT had had a similar case, and he called attention to the fact that Stokes said that these cases were of the same nature as the swelling of the leg following parturition, and had actually called them phlegmasia alba dolens.

DR. SENN believed that the swelling of the leg in these cases was from thrombosis of the femoral vein, caused by deficient *vis-a-tergo*, while in "milk-leg" septic phlebitis is the cause.

THE PATHOLOGY AND MORBID ANATOMY OF TUBERCLE,

being the subject of a paper by DR. SENN before the Society at its session a year ago, was now called up for discusson.

DR. MEACHER said that it was a question whether tubercular disease is inherited, or only a tendency to it. Pathologists, he said, differed on this point, the best clinical observers being in doubt. A recent writer in the *Lancet* says experience does not teach us whether tubercular disease is inherited, or whether there is simply a soil ready for it. In some, after many years, it seems to break out without exposure.

DR. SENN defended his proposition that tubercle is always a product of a specific inflammation caused and incited by bacilli. This has been made plain by the experiments of Koch. Hereditary tendency may exist, but if the general system is robust, it will be thrown off. If the system is debilitated, there is ready for the development of tubercle a fertile soil. The heredity of the disease consists in anatomical predisposition to it, due to peculiar anatomical arrangement of cells. All bacilli or micrococci have a tendency to enter white blood-cells, or to change their character, deleteriously favoring local congestions from emboli, and causing inflammation of a specific type.

Dr. Meacher, of the Committee on Surgery, reported a case of lithotrity, and also read a paper on

ANTISEPTICS,

in which he expressed his belief that the use of the spray was in many cases of serious operations even not necessary, and he personally was generally satisfied to do without it. He believed carbolic acid, iodoform, and corrosive sublimate the best antiseptics known, extolling the virtues of the latter, and called attention strongly to the benefits of absorbent cotton in surgical dressings.

Dr. Binnie reported a case of

STRANGULATED FEMORAL HERNIA,

where an operation had been performed, resulting in the formation of an artificial anus, seventeen days after the operation, and terminating in the closure of this opening and in complete recovery in three months. In subsequent remarks, Dr. Binnie strongly advocated operation for strangulated hernia without prolonged taxis, which he believed made subsequent operation, if it became necessary, dangerous; while an early operation, when the patient was in good condition, was simple and attended with little risk to the patient, at the same time working a radical cure.

Dr. Stansbury and Dr. Reynolds both favored the use of large doses of opiates and of chloroform. After the prolonged use of these remedies, reduction was usually easy.

Dr. Catlin related a case in which he had succeeded in reducing a hernia by the application of an elastic rubber bandage; the uniform equable pressure of which, maintained for an hour, caused the reduction of the hernia, after taxis, opiates, etc., had failed.

Dr. Brett had found great benefit from tapping the hernial sac with a hypodermic syringe, drawing off the accumulated serum, and from tapping the knuckle of intestine, unscrewing the barrel of the syringe and allowing the gas to escape. In one case where all these had failed, he had succeeded by inserting the finger-nail under the constricting ring, and by steady pressure stretching or slightly tearing the same.

Dr. Stansbury, of the Committee on Gynecology, read a paper entitled

REST, THE GREAT ESSENTIAL TO COMPLETE INVOLUTION,

in which he entered a strong plea for prolonged rest after parturition, arguing that the period of involution in healthy women is regulated by as fixed a law as is that of pregnancy, and urging rest in bed for a period of six weeks, that involution might be complete before getting up, and that a train of troublesome uterine diseases might be prevented.

Afternoon Session.

Dr. Barnett read a paper on

MECHANICAL GYNECOLOGY,

entering a plea in favor of the use of the pessary more frequently than it is now used, claiming that mechanical support is indicated in all forms of uterine displacement not complicated by acute or malignant disease, whether attended with discomfort or not—cases of version or flexion which seem firmly fixed by adhesions, should not be abandoned as irremediable until every resource of graduated support and extension has been patiently tried. He had known a chlorotic patient, who had made the rounds of routine medication, to recover promptly upon the mechanical support of a retroversion. He had never known injuries to result from pessaries, always removing them immediately if they produced discomfort.

Dr. Meachem, Jr., Chairman of the Committee on Obstetrics and Gynecology, read a valuable paper on *Pelvic Cellulitis.*

Dr. Wenzel, of the Committee on Pathology, read a paper on

THE RELATION OF DIPHTHERIA AND ERYSIPELAS TO PUERPERAL FEVER,

the following being some of the conclusions of the writer: (*a*) Puerperal fever is of septic origin. (*b*) The poison may be carried from one to another, or, indirectly, by a third person. (*c*) Zymotic diseases affecting the puerperal woman may become virulent or malignant, but they retain their entity, and are the same when under similar conditions in another patient, or in the same patient at a different time. (*d*) There are no grounds to consider the diphtheritic patches appearing as a concomitant of a puerperal disease as diphtheria; diphtheria is a constitutional disease, with local manifestations, usually in the fauces; the diphtheritic patch is only an accidental process in some of the diseases of childbed, appearing only upon or in the organs of generation. (*e*) No dried diphtheritic infection has been observed to produce anything else than diphtheria, and if a parturient patient becomes infected with it, the disease is diphtheria, and not puerperal fever. (*f*) Erysipelas may develop in the puerperal woman, and prove rapidly fatal, without external manifestation. (*g*) The diagnosis between erysipelas and puerperal fever is very difficult or impossible during life.

Dr. Clark, of the same Committee, also presented a paper, bearing the same title. He said that no special micro-organism or germ had yet been discovered as the cause of either erysipelas, diphtheria, or puerperal fever. Until such discovery is made and verified, or some other cause indubitably established, the etiological relation of these diseases to each other will remain a subject of speculative inquiry. So far as is known, each productive germ throughout universal nature, large or small, produces its kind; but there is no fully accepted definition of puerperal fever; its morbid processes have not been accurately measured. Owing to the immensely favorable conditions for bacterial growth and absorption presented by the puerperal state, the invasion of any putrid infection is likely to be in great force, and accompanied by many different kinds of bacteria, especially those of putrefaction.

The puerperal state presents a condition of lowered vital resistance, and, in addition, opens wide gaps in the line of natural defences. Through the lochial discharges and thrombi in the uterine sinuses it provides an abundance of highly nutritious food for the enemy, whether that enemy be erysipelas, diphtheria, or a hypothetical puerperal poison. This poison cannot be expected to advance alone, for there must always be more or less of the virus of putrefying lochia blended with it, thus presenting a clinical picture of profound poisoning of the blood and nervous system, which does not materially differ whether the virus be traced to an offensive autopsy, to a case of phlegmonous erysipelas, or to what is vaguely termed epidemic influence. The fact that the worst cases of puerperal fever begin within two to four days after labor should never be lost sight of. It is then that the internal surface of the womb is in the best possible condition for the absorption of poison. If absorption does not take place until a few days later, the case generally falls short of puerperal fever, and becomes pelvic cellulitis or pelvic peritonitis, pyæmia, mammary abscess, or embolic obstruction of veins, such as is seen in phlegmasia alba dolens.

The entire lochial discharge should be rendered strictly aseptic, and for this purpose dressings of antiseptic absorbent cotton and gauze should be faithfully applied during the first week in every case.

The question whether there is causal relation between erysipelas, diphtheria, and puerperal fever cannot be answered until the special germ or poison of each disease can be ascertained.

Dr. Hoegh read a report of a case of *Sudden Deafness, with Loss of Coördinating Power.*

Dr. E. W. Bartlett read a paper on a *Modification of the Operation for Cataract*, and also a paper showing the

PREVALENCE OF COLOR-BLINDNESS,

and urging proper legislation for the protection of the travelling public from dangers arising from this cause. The following resolution was adopted in reference to this matter:

Resolved, That a special Committee on Color-blindness be appointed, whose duty it shall be to disseminate information in regard to its nature and frequency, and to secure the influence of persons, medical societies, and corporations throughout the State to obtain proper legislation in regard to the employment of the color-blind.

The President appointed Drs. E. W. Bartlett, Hoegh, and Brett as this Committee.

Dr. Bartlett also exhibited various forms of nasal douches, and several forms of magnets and needles for the removal of metallic bodies from the eye.

Dr. Brett reported an interesting case of

POST-RECTAL ENCYSTED TUMOR COMPLICATING LABOR,

it being necessary to remove the tumor before delivery could be effected. In size, the tumor, which was an encysted one, filled with an odorless brown fluid, was as large as a child's head. The recovery was rapid.

Dr. Davies presented a paper on the *Obstetric Forceps and How to Make Traction.*

Thursday, September 6th, Third Day.

Morning Session.

Dr. Catlin reported a case where death had suddenly followed what was supposed to be

BILIOUS COLIC,

to which the patient had been subject for a number of years. A post-mortem revealed an enlarged gall-bladder, impacted with gall-stones, ulcerated, and ruptured. About two hundred gall-stones were found, their aggregate weight being three hundred and sixty grains.

REMOVAL OF THE ASTRAGALUS.

Dr. Manley presented an astragalus which he had removed for disease following dislocation. The wound healed kindly; the foot presented a symmetrical appearance, though slightly inverted; and two months after the operation there was limited motion. The removed bone was examined with interest.

PROPHYLAXIS OF PHTHISIS.

The following resolution offered by Dr. Manley was adopted:

Resolved, That in consideration of the advance made as to a knowledge of the causes of consumption, and of the now known infectious character of the disease, we use all means in our power to have the phthisical members of our families as much as possible separated from the healthy members; and also that we recommend the State Board of Health to take means to have such persons separated from intimate association with the well in our public institutions.

Dr. Epley read a paper on the

THERAPEUTICAL USES OF ERGOT,

claiming for this remedy a place of the same rank as that accorded to opium, quinine, and iron. Its chief action is upon the nerve-centres; not affecting voluntary muscular fibre. It is the most universal and potent internal hæmostatic in use. Is valuable in the night-sweating of phthisis; in congestive headaches; in dysentery, and in various other diseases; but in the opinion of Dr. Epley, its greatest value lies in its power to arrest acute local inflammations, especially in the lungs. It has also proved to be very useful in controlling hacking, irritative coughs where there is a relaxed state of the mucous membrane. The paper concluded with the assertion that ergot would abort ten cases of pneumonia to one pregnancy.

Dr. Manley endorsed from his experience, the use of ergot for controlling the kind of coughs referred to.

Dr. Meacher believed that the claim that ergot will abort pneumonia is fully justified.

Drs. Binnie and Bartlett also spoke in support of the value of this drug in the diseases named by Dr. Epley.

After the transaction of some considerable routine business, and the adoption of an amendment to the constitution, making the office of the Secretary permanent, and fixing the term of office at ten years, the Society adjourned, having had, as is generally conceded, one of the most pleasant and profitable sessions in its whole history. There was no formal social gathering as has frequently been the case, but a general good-feeling pervaded all of the meetings. Several of the papers presented were of a high order of ability, and the discussions elicited by them were highly interesting and instructive.

THE NEXT MEETING

of the Society is to be held in the city of Milwaukee, on the first Tuesday in June, 1884.

THE OFFICERS FOR THE ENSUING YEAR

are as follows:

President.—Dr. N. M. Dodson.

Vice-Presidents.—Drs. E. W. Bartlett and G. W. Jenkins.

Permanent Secretary and Treasurer.—Dr. J. T. Reeve.

Assistant Secretary.—Dr. Wm. Thorndike.

Censors.—Drs. Mason, Senn, and Thorndike.

RHODE ISLAND MEDICAL SOCIETY.

Quarterly Meeting, held at Newport, September 20, 1883.

(Specially reported for The Medical News.)

The meeting was held at Newport Masonic Hall, and was called to order by the President, Dr. Job Kenyon.

The Secretary, Dr. G. D. Hersey, read the records of the annual meeting, which were approved.

Dr. Hersey exhibited several specimens of

BLACK IRON-DYED SILK,

claiming it to be the best kind for surgical use. This silk, he said, was dyed in iron, and finished in acetic acid. It is round, firm, and can be waxed, oiled, carbolized, etc., the same as any other kind. It comes in fourteen sizes, the largest size being sufficiently strong for any surgical use. It is also the cheapest silk in the market.

It is non-irritating to the skin. A case was cited in which sutures of this silk were employed in closing a lacerated wound of the eyelid, and at the end of thirteen days, five of them were still in place, having caused no inflammation. Ordinary white silk, in the manufacture of which *lead* is used, is very apt to irritate. Another important advantage in using the *black* silk sutures lies in their being so *readily seen*, as, for instance, in the operation of circumcision, where œdema is likely to occur and conceal the stitches, especially if white silk is employed.

Dr. W. E. Anthony read a paper on

THE ADVANTAGES OF IMMEDIATE DELIVERY OF THE PLACENTA IN NATURAL LABOR.

Attention was called to the discrepancy between the practice and precepts of teachers on this subject. One author says we may wait twelve hours for the afterbirth—another says twenty minutes. The reader could not see why *one hour* or *one minute* should be allowed to intervene between the so-called second and third stages of labor, he having become convinced by clinical observation and study that no time should be lost. What is known as the third stage of labor may be also subdivided into—1st, the detachment of the placenta; 2d, its expulsion from the uterus; and 3d, its expulsion from the vagina. Of these, the first is most important, for, once it is accomplished, the other two follow readily.

It is best that the second stage of labor be merged into the third, for, during an interval of delay, danger to the patient may arise from hemorrhage, uterine inertia, entrance of air, and, later, septicæmia.

It was the writer's custom to adopt such measures before the birth of the child as should insure this—namely, to employ the method of Credé during the close of the second stage, grasping the uterus through the abdominal wall, with one hand following it down as it contracts, and maintaining the compression until the delivery of the placenta is complete. If necessary, the finger of the unoccupied hand is introduced, and the placenta separated. It is much better to accomplish all this during the severe uterine contraction that comes with the birth of the child; and the Credé squeezing process employed thus early tends to insure both the detachment of the placenta and its folding together, so as to be expelled with its long diameter corresponding with that of the maternal passages. Of course, in case of retained placenta due to calcareous, fibrous, or syphilitic degeneration, the hand must be passed into the uterus, and there is no better time to do this than immediately after the second stage.

The advantages of thus securing an immediate delivery of the placenta were named as follows:

1. The uterus having firmly contracted upon itself will remain so, and post-partum hemorrhage will not occur. 2. No clots remaining in the uterine cavity, septicæmia is not to be expected. 3. The speedy removal of the placenta is a source of relief to the patient. 4. After-pains are less. 5. The lochia are more natural. 6. It saves time; and 7. It is carrying out the natural law of parturition.

In remarking upon the same subject, Dr. D. H. Batchelder said: We meet with very few *natural* labors—*i. e.*, when the placenta is attached centrally to the fundus of the uterus, in which case you will get uniform pains.

When, however, the attachment is on one side, there will be unequal contraction of different parts of the uterus. The so-called severe *frontal* pains are caused by the placenta being attached posteriorly; and *back* pains are due to the attachment being to the front part of the womb.

He had also found, on post-mortem examination, that when rupture of the uterus occurs, the placental site is near the os internum, thus approximating placenta prævia.

It was his practice, when called to cases in which the contractions were not uniform, to call at once for a shawl or blanket, and tie it very tightly around the patient's abdomen. This soon causes the pains to be uniform and effectual by equalizing the force of the contractions, so that the uterus does not become tired out. Since adopting this plan of treatment, he had not had post-partum hemorrhage once in 19 or 20 cases. It was also his practice to secure the immediate delivery of the placenta by measures similar to those described by Dr. Anthony.

THE REPORT OF THE BOARD OF CENSORS

was then presented by Dr. Eldredge. It recommended the following

NEW FELLOWS,

who were then duly elected:

Drs. Arthur H. Harrington, John P. Sweeney, Geo. V. Foster, Henry Arnold, and Ezra Dyer.

Dr. S. W. Francis reported a case of

PROBABLE EPITHELIOMA CURED BY ASTRINGENT WASHES.

The patient was a woman, forty-five years of age. The disease was on the inner side of the cheek, and seemed to have been caused originally by the irritating effects of a carious molar tooth. The writer had no doubt as to the cancerous nature of the ulcerative disease that followed in the cheek; and this diagnosis was confirmed by other physicians.

The offending tooth was first removed, it being the right inferior second molar. The cavity of the sore was then kept packed with charpie, and the following lotion applied to its surface four times daily:

R.—Tinct. opii, ... ℥ss.
Tinct. myrrh.,
Glycerinæ, ... āā ʒj.
Liq. plumb. subsulph., . . . ʒss.
Aq. rosæ, ... ad. ℥iv.—M.

Syr. ferri iodidi in gtt. xx doses, *t. i. d.*, was also given. Under this treatment, the patient has steadily improved, and bids fair to wholly recover.

Dr. O'Leary reported a case of

CONSERVATIVE SURGERY.

A boy's hand was severely injured in machinery last February, the index and middle finger being so far crushed and lacerated that amputation, at first, seemed the only thing to do; but it was decided to simply dress the hand and wait a little. In ten days the first (*i. e.*, next the palm) phalanx of the index finger was found to be detached, and was removed. The case then went on to complete recovery; the lost phalanx being replaced by new bone. The boy now has a perfect index finger with the joints all movable.

Dr. T. W. Perry showed the

SKIN OF THE PALMS AND THUMBS WHICH HAD BEEN EXFOLIATED ENTIRE IN A CASE OF DERMATITIS.

The patient, a man, fifty-three years old, had a chill June 12, 1883, and four days later there was exfoliation of the epidermis over the whole body; that of the palms and soles coming off complete. The patient was then literally as "red as a lobster" from head to foot. This was followed by apparent recovery. July 3d, a second chill occurred, and then came another complete desquamation, the scales being thinner than those first cast off. July 29th, a third chill, with exfoliation on the fourth day after. August 11th, the process was repeated the fourth time. The desquamation took place in no definite form, but in irregular patches, underneath which was a semi-transparent fluid, resembling flour and water paste. There has been no recurrence of the attack since the date last named.

The man had the same disease thirteen years ago. The treatment, both times, consisted of arsenic and iron internally, and cod-liver oil externally. The sulphide of calcium was also given in the recent attack, with the local use of ung. diachylon. The man is a worker in broadcloth. He suffered greatly from itching, but there was no severe pain.

IODOFORM IN CANCER.

Dr. Perry also spoke of a woman who had a sore the size of a silver dollar, with indurated edges, and of eleven years' standing, on the side of her neck. She regarded it as cancerous. Iron and potassium iodide internally, with iodoform locally employed, led to a perfect recovery in two months. Two cases of cancer of the uterus were mentioned which had apparently been cured by the use of iodoform.

Dr. Ezra Dyer, of Newport, exhibited

A NEW PERIMETER

of his own devising. It consisted of a standard of wood, supporting a spiral of wire. Within the spiral an arm of brass is made to revolve by turning a crank on the back of the standard. As the arm revolves, an objective or *traveller* moves correspondingly upon it, towards or away from the centre of the spiral. In the old style of perimeter, both the *arm* and *traveller* had to be moved again and again by the hand of the operator. The exhibitor said that a case of scotoma could be excluded in one minute by means of his instrument. He also said he proposed to make a further improvement by the addition of a small electric light to be used in certain tests.

It was voted that the thanks of the Society be extended to Dr. Dyer.

Dr. H. G. Miller said that he had been treating a case of retino-choroidal disease in a man who was both intelligent and skilful in the use of the pencil and brush. He had thus kept an accurate record of the progress of his own case by a series of charts illustrating his power of vision at the time the tests were employed. These charts, bound into a volume, were shown by Dr. Miller as constituting a most plain and accurate record of the case.

The Chairman then called for the report of the committee consisting of Drs. A. Ballou, J. H. Eldredge, and S. W. Francis, appointed at the June meeting to consider the

PROPOSITION TO ABOLISH THE CORONER SYSTEM IN RHODE ISLAND,

and to substitute, therefore, that of *Medical Examiners*.

Dr. Ballou said that he had not as yet called the committee together, and consequently had nothing to report, but hoped the subject would be discussed freely.

Dr. Storer said that Dr. Francis had sent circulars of inquiry to all the towns of the State. The replies, so far as received, showed that there were only two coroners in the State who were physicians—those two being in Providence.

The remaining coroners were farmers, assessors of taxes, auctioneers, undertakers, station agents, lawyers, firemen, clerks, grocers, etc.

Dr. Storer also said that in Suffolk County, Massachusetts, which includes Boston and Chelsea, where there were, under the old law, forty-seven coroners, there are now two medical examiners—and that the duty of the examiner ceases, for the time being, at least, when he has expressed his opinion in a given case, whether or not murder or crime has been committed. The case, if necessary, then goes into the hands of the trial justice.

Dr. H. W. Williams, of Boston, an honorary member of the Society, was called upon and spoke of the workings of the new system in Massachusetts. He said that formerly the coroner system in Massachusetts was similar to that of Rhode Island, the coroners being chosen from all classes of occupations, and that when doctors were found among them, they were usually disreputable ones or mere pretenders, whose decisions were apt to be made up of the opinions expressed by bystanders, etc.

The Massachusetts Medical Society had used all its influence to secure a change, and he thought the State had been fortunate in the men appointed medical examiners—some seventy first-class physicians now serving in that capacity. The Medico-Legal Society, an outgrowth of the new system, has been of great service to the public.

The Medical Examiner becomes an expert in the matter of autopsies, and far better able to judge as to the cause of death. Hence a large proportion of cases are dismissed as not requiring further investigation, but if it goes on to prosecution, the new system results in giving to the legal authorities a far more satisfactory account of the cases, and with much less notoriety.

When asked as to the comparative expense of the two systems, Dr. Williams replied that the cost in Suffolk County had been reduced to about one-third what it formerly was, and that on political, scientific, and financial grounds, the new system in Massachusetts is proving a grand success.

A draught of a new law for Rhode Island having been framed by a committee of the Newport Medical Society, and submitted to the General Assembly of the State at its May session, 1883, together with a petition that the same become an enactment, Dr. Browning asked Dr. Storer how nearly it corresponded to the present law in Massachusetts.

Dr. Storer said that it resembled the latter in many particulars, but differed in some, and that the advice and approval of Dr. Hossmer (Mass.,) had been sought in framing the present draught.

It was then voted to add the names of Dr. Lloyd Morton, of Pawtucket, and Dr. H. G. Miller, of Providence, to the committee on this subject.

Upon motion of Dr. Turner, of Newport, it was voted to instruct the same committee to ascertain if a law requiring burial permits exists all over the State.

Dr. J. H. Eldredge reported a *Case of Gunshot Wound*, four bullets entering the body—in the jaw, shoulder, side, and back.

Adjourned.

MEDICAL SOCIETY OF VIRGINIA.

Fourteenth Annual Meeting, held at the Rockbridge Alum Springs, September 4, 5, 6, and 7, 1883.

(Specially reported for The Medical News.)

(*Concluded from page 335.*)

Evening Session.

Honorary Fellow Dr. A. M. Fauntleroy, of Staunton, read a report on the therapeutic qualities of

ROCKBRIDGE ALUM SPRINGS WATER.

After giving a chemical analysis of the springs, he showed the therapeutic uses, and gave clinical results of the action of the water. Dr. Fauntleroy specially pointed out the therapeutic value of these waters in scrofulous, tuberculous, and specific diseases. The waters are "alterative" in the therapeutic sense of the word, as well as deobstruent. In dyspepsia of various forms, especially where it occurs in overworked ladies, these waters, properly used, are of peculiar value. They are also particularly recommended for "female irregularities." They diminish the amount of acid secretions, and hence are useful in forms of nephritic gravel, as well as in gastric and hepatic torpidity. The sodium sulphate probably assists in restoring the normal activity of the liver.

The President, Dr. J. Edgar Chancellor, enumerated several cases of severe strumous disease which had occurred in his practice, which had been entirely cured by the use of the water.

LETTERS OF REGRET.

A letter was read from Honorary Fellow Dr. J. Marion Sims, of New York, who had just returned from Europe, regretting his misfortune in not being able to attend. A like letter was received from Dr. Metcalf, of New York.

The subject of

DIPHTHERIA

Again being called for, Dr. J. J. Chisolm, of Baltimore, Md., made some remarks, in which he expressed a doubt whether there was really such a trouble as diphtheria of the eye, as a distinctive disease.

Dr. McLane Tiffany, also of Baltimore, stated that tracheotomy does not cure the disease, while the operation does not kill the patient. Tracheotomy, even when successfully performed, relieves a symptom—that of "want of breath." He thinks it almost impossible to decide where the difficulty of breathing in such cases begins, and in many cases it is impossible to decide when to begin to operate. He has never been able to decide strictly when the obstructing membrane was above the sternum, or when below the usual point of tracheotomy. He related a peculiar case, in which he opened the trachea just before death resulted, but after opening the windpipe, he found it fully plugged with a diphtheritic exudation, through which neither a tracheotomy tube could pass, nor a probe made to enter.

Dr. L. B. Edwards related a case of tracheotomy he had seen performed (and in which he had assisted) by Dr. Hunter McGuire and O. F. Manson. One of the heated blades of the Paquelin thermo-cautery, as modified by Dr. H. P. C. Wilson, of Baltimore, was used as the knife. The operation was successfully performed, and the patient lived for some days. He died, however, of capillary bronchitis. Whether his death was due or not to an extension of the membranous trouble, he had no opportunity of finding out, but he doubts whether or not there is a greater cause for apprehension than the extension of the membrane downwards. Blood-poisoning evidently had much to do with his death. Dr. Edwards fully agreed with Dr. Tiffany that it was impossible to decide *when* or *even where* to operate; but in cases which are sometimes presented he thought doctors, as the only parties upon whom anxious friends depend in such an adversity, should speak plainly and operate boldly. We cannot always save life, but because of popular prejudice against an operation that has saved so few lives, why should we reject that one operation that has saved *some* lives? Is there a better remedy for an obstacle in the windpipe than giving the patient free inspiration? If we fail to reach far enough to let the patient have the necessary respirations, then the doctor is simply unfortunate and the patient is the victim.

Dr. W. W. Parker begged the younger doctors not to become discouraged because they lose some patients who have diphtheria; no physician can save all his cases. In many cases, he had found value in the vapor of lime. Build a sort of tent over the child, and inside of this tent slake lime so as to get the air fully impregnated with its vapor.

Dr. J. N. Mackenzie, of Baltimore, remarked upon the development of adenoid growths as a sequel of diphtheria. They occur especially in the post-pharyngeal space. This is a point not enough studied; but little has been written upon it. He believes the simplest means of treatment to be the best; hence he relies mainly on steaming for local applications. Internally he would advise the use of small doses of the bichloride of mercury, such as a teaspoonful or two, according to age, etc., of a solution of one or two grains of corrosive sublimate in a pint of water.

Dr. R. I. Hicks, of Cassanova, Va., related a peculiar instance where a diphtheritic patient associated with a number of persons in health without conveying the disease to them.

Drs. Patterson, of Monterey; C. T. Whiting, of City Point; James Craddock, and others, reported cases as confirmatory of one point or another that had been made.

Dr. Wm. C. Dabney, of Charlottesville, Va., said he had seen cases where sanitary conditions existed, and yet death had occurred in a few days. He had seen peritonitis, he thought, produced by diphtheria.

Dr. Samuel B. Morrison, of Rockbridge Baths, Va., had never seen a case that was not constitutional in its origin; but he believed in local treatment. His experience had taught him that the poison may remain quiescent for years in one locality, and then suddenly break out. He thought all remedies should be more often employed than is common, and that a person of strong vitality cannot contract the disease. From his experience, he judged diphtheria and typhoid fever to have the same germ, only manifested in different ways. He strongly believed in complete isolation of a diphtheritic patient.

Dr. J. St. Peirre Gibson, of Staunton, Va., believed that peritonitis could be produced by diphtheria, and cited a case in point.

Dr. A. M. Fountleroy, of Staunton, mentioned a number of cases showing the peculiarities of the diphtheritic poison. One instance showed where a servant-girl wiped up the floor where ice had melted from a diphtheritic corpse, and contracted the disease, and he mentioned another case where a boy stopped over night at a house where the disease existed several days before, and not only received the poison, but communicated it to thirty-two other children in an asylum which he entered. He spoke of the difficulty of ingestion of food in the disease, and mentioned a case where he had fed the patient three weeks through a stomach-tube, with ultimate recovery.

CHOLERA INFANTUM.

Dr. Samuel K. Jackson, of Norfolk, Va., by request, described his method of *preventing* cholera infantum, which consisted in the administration of the following:

R.—Sulphite of soda,
Hyposulphite of soda,
Aromatic syrup of rhubarb,
Bicarbonate of soda, . . . āā gr. ij.—M.
S.—Take every two hours, when required.

Malarial fever was selected as the subject for general discussion at the next annual meeting, and Dr. R. B. Stover, of Richmond, Va., was appointed to open it.

ROCKBRIDGE ALUM SPRINGS, VA.

After the introduction and adoption of several complimentary motions as to the excellent management of this place, the following, offered by Dr. Samuel K. Jackson, of Norfolk, Va., was unanimously adopted:

"The Medical Society of Virginia does hereby bear testimony to a thorough examination into the medicinal properties of the Rockbridge Alum Springs water, and from the professional knowledge and information obtained, it unhesitatingly endorses and recommends the same to persons afflicted with the following disorders and diseases: some forms of dyspepsia or indigestion, scrofula, incipient consumption, chronic bronchitis, chronic laryngitis, chronic pneumonia, chronic diarrhœa, chronic dysentery, aphthous diseases, many of the chronic skin diseases, torpidity of the liver, and diseases peculiar to females.

THE COMMITTEE ON THE CONSTITUTION of the Society, appointed last year to suggest what, if any, changes were necessary, presented their report, and most of the emendations suggested were adopted—all to take effect at the next annual session.

The same Committee was continued another year to codify the various resolutions, etc., governing the action of the Society, in matters not involving the Constitution.

Various resolutions of local importance were passed, and the Society then adjourned, to meet next year at the Rawley Springs, at the call of the Executive Committee.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Thursday, September 6, 1883.

THE PRESIDENT, R. A. CLEEMANN, M.D., IN THE CHAIR.

DR. WM. T. TAYLOR read the report of a case of

FACE PRESENTATION WITH ECLAMPSIA.

Face presentations are somewhat rare. Dr. Churchill, some years ago, in recording the statistics, found that in British practice they occurred once in 292 cases, in French practice once in 275, and in German practice once in 130 cases. In my own practice, I have met with about one dozen, and as the last was combined with eclampsia, I will report it to the Society.

During utero-gestation, my patient enjoyed very good health, having no headache, no swollen limbs nor bloated features, no vertigo nor dimness of vision. There was no deficiency of urine, and therefore I did not examine it for albumen. Her appetite was fair, her bowels regular, and she took a moderate degree of exercise, so that I had no reason to expect any trouble when labor began.

On May 14, 1883, I was summoned, at 6 A. M., to visit Mrs. C. Haley, aged twenty-three years, primipara, who was in the first stage of labor, having had a show since midnight. On examination, I found the os very slightly dilated, with the pains "few and far between," and the face of the child presenting, with the chin toward the sacrum. The nurse informed me that the patient had not slept during the night, and was very nervous and irritable. Her skin was moist, her pulse normal, and she had urinated frequently.

I gave her a mixture containing hydrate of chloral, bromide of potassium, and valerianate of ammonia, to compose her, and went home for my breakfast, intending to return in a few hours.

At 8 o'clock, the husband came to my office, and told me that his wife had "had a fit, and could not keep the medicine down." I arrived at the house at 8.30 A. M., and sent immediately for some powdered hydrate of chloral and an injection apparatus. The patient had had two convulsions, which were ushered in by complaints of her head, her face being very red, and her head drawn to one side, with the features much distorted. The first convulsion occurred when the nurse was about to give the first dose of the medicine. Directly after my arrival, a third convulsion occurred, and lasted for a minute or more, her head being violently drawn to the right side, with jerking of her arms and legs.

I dissolved one drachm of the hydrate of chloral in about four ounces of water, and threw it into the rectum. The fit yielded immediately. As she was unconscious, I had an excellent opportunity for examining her. The os was dilated to the size of a quarter dollar, and soft, so that it yielded gradually to the pressure of my fingers, when I discovered the face presentation, with the chin toward the left sacro-iliac junction. I endeavored to push the chin toward the breast, so as to bring down the occiput in the second position of Baudelocque. This I found somewhat difficult, but as the os dilated under the pressure of my fingers, I reached the occiput, and, after several attempts, succeeded in bringing it down to a favorable position, the one aforesaid. My patient, by this time, was becoming restless and uncontrollable, and, fearing another convulsion, I again gave her an injection of chloral, which quieted her. Having placed her on her back, and brought her to the edge of the bed, her limbs being supported by the nurse and a neighbor-woman, the forceps were easily applied, and the head brought down below the inferior strait. I removed the instruments when the head pressed against the perineum, allowing nature to finish the delivery. The child, a boy, was still, the cord being pulseless; in fact, I was apprised of this whilst endeavoring to dilate the os with my fingers, for a significant tremor had passed through the body of the child, assuring me of its death. The placenta was removed quite easily.

During all this time my patient was unconscious and had no return of convulsion from the time I gave her the first injection of chloral.

As her pulse was good and her respiration easy, I applied a binder, and having placed her in a comfortable position left her sleeping. On my return at 5 P.M., she was restless and slightly feverish, but after taking a few doses of chloral and valerian, she was quieted to sleep. On the next morning, May 15th, she was perfectly conscious, pulse 80, temperature 99°, and respiration normal. She had urinated freely, and with the exception of some slight soreness over the abdomen, was very comfortable. She inquired for the babe, knowing from her condition that it had been born, but the preceding twenty-four hours were, to her, a perfect blank. From this time she had no further trouble and soon recovered. This case certainly showed the beneficial effect of injections of hydrate of chloral in controlling puerperal convulsions when they are of a nervous form.

DR. ALBERT H. SMITH remarked that face presentations and puerperal convulsions presented a large field for discussion. Dr. Taylor was very fortunate to be able to bring around the occiput and keep it so until the forceps could be applied. In this operation a man needs three hands, one to hold the head while the others manipulate the instrument. The mechanism of a primary face presentation, as reported in this case, is difficult to understand. It may occur secondarily from obliquity of the uterus and a sudden free gush of waters, causing a sudden engagement of the head before flexion could be secured. In such cases it is very difficult to secure and maintain flexion until the forceps can be applied. In the majority of cases of face presentation, even with the chin posterior, nature is best able to terminate the case satisfactorily. It is to this class that the aphorism "meddlesome midwifery is bad" is most applicable. The natural forces work slowly, and the neck of the child becomes accustomed to the extreme extension which it has to undergo; while it is very bad to bring, by means of the forceps or otherwise, a sudden strain on the vertebræ and other tissues of the neck by too rapid forcing of the chin into violent extension. The consequence of the hasty proceeding is a still-born child. The only ground for interference is an alarming condition of the child's pulse. If the child's heart is beginning to fail, we must take the risk and give it the benefit of the chance. The child's head cannot be born in face presentation until the chin has engaged under the pubis. The old teaching was that the chin posterior could not be born, but he was very early undeceived on this point, one of his earlier cases having been of this character. He had sent for his preceptor to come and bring perforating instruments, but while awaiting their arrival, nature proved equal to the task, rotation occurred spontaneously and a living child was born.

Dr. B. F. Baer inquired if version by the feet would not be much preferable to waiting for nature to deliver in chin posterior positions.

Dr. Smith did not mean that we should never interfere in a case of this kind, but that a large majority, if left to nature, would terminate spontaneously by anterior rotation of the chin, with safety to both mother and child. He would decidedly negative the proposition of version by the feet, because the amniotic sac having been necessarily ruptured by previous efforts to bring down the vertex, the waters would have been completely drained off, the uterus would be in a condition of spasmodic contraction, and an attempt to turn would involve great danger of rupture of the uterus. The introduction of the hand always increases the risk of septic absorption, two terrible risks against the mother, while the child is exposed to all the dangers of head-last delivery. He would consider chin posterior presentations natural labors, and would allow them to terminate spontaneously, unless there was some complication demanding version.

Dr. J. G. Allen coincided with Dr. Smith in his conservative principles. The risks of version to the mother are great, too great to allow it to be performed for the sake of the child. The operation of version is not looked upon in as serious a light as it should be under all circumstances. In some instances it may be very easy, and may terminate well, but in others, apparently similar in conditions, the results to the mothers are bad. He would not lose one mother to save ten children. He would never resort to version unless the labor was impossible under other measures. Even after it is skilfully performed the child is often still. The increased risk to the mother is followed by no corresponding gain in safety to the child.

Dr. R. P. Harris thinks the ideas of Dr. Smith are the same as held by most eminent obstetricians, and agrees with their practice as expressed to him in private correspondence.

Dr. Baer was willing to be taught. The views expressed this evening did not harmonize with the teaching of even the present day in Philadelphia. He had been taught that version would be proper if the case was diagnosticated early, and the operation could be performed before the waters were evacuated, and it seemed to him that the rational thing under such circumstances would be to turn. It was entirely a new light to him to consider chin posterior cases as easy natural labors. He had been taught to look upon them as impossible, and that rotation never took place, the forces in action not being great enough to compel it. His own recent experience had led him to doubt this dictum; with one blade of the forceps used as a vectis, he had without difficulty secured anterior rotation. His idea of the impossibility of rotation under the circumstances made him doubt the correctness of his diagnosis of the position, but the principles put forth this evening reassured him. May not the death of the child, causing relaxation, be the cause of the face presentation?

Dr. Allen does not expect others to accept his opinion, but in his denunciation of turning, he alludes to the complete transposition of one extremity of the fœtal ellipse for the other, and does not include the changing of one part of the head for another, but in the first class the poor chance of saving the child will not compensate for the increased danger to the mother.

Dr. Smith does not consider chin posterior an easy natural labor. On the contrary it is the most difficult of natural labors. The chin strikes upon the posterior inclined planes and is rotated to an anterior position, in which it engages under the arch of the pubis exactly as the vertex would. In multiparæ nature is able to accomplish this result, but in primiparæ assistance in rotation may be required, and even traction may become necessary. In contrasting the dangers incident to version by the feet and those involved in trusting to nature in this condition when the waters have been discharged, as they necessarily have, in the attempts to bring down the vertex, which would be first tried, we must remember that the child will be tightly grasped by the uterus, and that it must be twisted upon its long axis as well as turned, to bring the nape of the neck under the arch of the pubis, and that this procedure will greatly enhance the danger to both mother and child.

Dr. Taylor, in closing the discussion remarked that the death of the child occurred after it was fully engaged, and was not a factor in causing the face presentation. When he made his diagnosis of position the head was high up, and the child being small he had no difficulty in bringing down the vertex.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting September 12, 1883.

The President, Wm. M. Welch, M.D., in the chair.

Dr. Charles M. Seltzer read a paper on

DIETETICS FOR THE SICK.

The methods of dietetic treatment of diseases are as various as are the ills that flesh is heir to, but all of them contain some of the following principles as essential features. In acute diseases, *rest* is of primary importance; it is the fundamental principle of their medical and surgical treatment, and the same idea must be carried out in dietetics by remembering what part each organ serves in absorption, assimilation, and excretion, and by avoiding such food as would cause the performance of that function. Of course, this plan is only to be pursued while the disease is advancing, and as soon as recovery begins there must be a gradual return to a promiscuous diet, very little at first, just enough to slightly exercise the crippled organ, using as great care as we would in instituting passive motion in a limb that has been fractured. Nature enforces this principle by the loss of appetite that marks the onset of nearly all acute diseases. The dietetic rest of an organ does not necessarily imply a depletory diet, for while it is non-active, other organs may be made to perform a compensatory amount of work, and thus sustain or even increase the patient's vitality. It is upon this idea that we must act when we obey the command of Graves to feed fevers. In chronic diseases food should be administered as frequently as assimilation and proper amount of organic rest will allow; the appetite should be kept active, by using food prepared in such a variety of ways as to allow no charge of monotony or disgust. A valuable aid, usually lost sight of, is condiment. Many of the bitter tonics and carminatives of our materia medica are the same as are used in cookery, and are none the less efficacious in a palatable dish than in the nauseous pill or draught. Therefore let the delicate aroma of herbs, celery, and bay leaves pervade the soups; use India curry on starchy foods, and when desirable add *Capsicum*, *Piper nigrum*, etc., to animal broths and substances.

Some articles of diet may be administered simply for their curative effect. A five-ounce cup of strong coffee contains about sixty-six grains of extract, or an equivalent of about two grains of *Caffeine* -quite sufficient to relieve a neuralgia, or a headache and sick stomach after a dose of opium. Beef-tea, made red-hot with red pepper, is the very best treatment for delirium tremens. Mucilaginous teas and drinks made from gelatine, isinglass, Irish moss, and flaxseed are very soothing to any inflammation within the digestive track. Green vegetables are necessary to cure as well as prevent scurvy.

In the science and art of preparing sick diet there is a most lamentable lack of knowledge, especially among physicians, and the only way to acquire this knowledge is to don the apron and take a practical course from a practical and scientific cook. Such a course was inaugurated last winter in this city and in Boston with a very satisfactory result. It is the only way to learn.

DR. L. TURNBULL, in opening the discussion, said: Physicians should learn how to make beef-tea, extract, etc., and similar articles. The important preparations of mush, of Indian and oat-meal, for instance, are rarely properly made. They should be prepared over night, so as to be thoroughly gelatinized; if made in the morning just before being served, they will not be digestible. In cases of very weak stomachs, many articles of diet may be peptonized with great benefit by using a small amount of a mixture of sodium carbonate and pancreatin, these being allowed to act for a short time at a temperature of about 80° F. Such peptonized foods are like the old-fashioned preparations made with rennet and warm milk, and will be well borne by delicate stomachs. An article that is often wrongly prepared is barley. It may be softened and extracted with water, or it may be torrefied, so as to make a sort of malt extract. In the latter form it is very suitable as a substitute for the diastase-like principle of the saliva in cases where that secretion is deficient. It can easily be given mixed with other food, as in puddings, for instance.

This summer we have been very successful in relieving the irritability of the stomach and bowels of both children and adults, due to temporary indigestion, by substituting first barley-water alone, and after a time a wineglassful of barley-water, with half a tumbler of milk, or its equivalent of condensed milk.

Beef-tea contains often but little nourishment, and in debilitated conditions, such as most cases of typhoid fever, beef-essence, made, not from the round of beef, but from the neck, in which blood is found, will be much more nourishing. A valuable form of beef-juice can be prepared by cutting up in pieces fresh beef, and placing it under a block of ice until, by the pressure, all the blood has been extracted. With the addition of a little salt it has been found to be retained by the most delicate stomach, and is very useful in cases of great exhaustion.

DR. ALBERT H. SMITH said: The older we get the less disposed we are to rely on medicine and the more on diet. The remarks in the paper in reference to the importance of teaching physicians the art of cooking, are deserving of full endorsement. On one point, however, I cannot agree with the author of the paper. He seemed to advocate the use of highly stimulating food in acute diseases. In cases of disease attended with high temperature, we only add fuel to the flame by the use of stimulating food.

The use of a low form of diet, with refrigerants and depressants, may often be of the greatest benefit. I can look back on my early experience, and recall cases in which, after operative measures, patients have been treated on the theory that plenty of pabulum should be furnished to the system, but such patients have perished. A strong patient will in such cases do much better on a low diet. Adhesive inflammation will be secured more satisfactorily on the low diet system.

DR. HENRY LEAMAN reported the following

CASE OF AMPUTATION OF THE BREAST.

Mrs. J. J. W., æt. 48, in September, 1882, complained of a tumor in her breast which she had noticed three months previously. At that time a small pimple upon the surface of the skin served to call her attention to the swelling that lay beneath in the substance of her breast. Examination showed a tender enlargement, the size of an English walnut, situated deeply in the inner, lower quarter of the left breast. She stated that during the past week she had experienced for the first time frequent, sharp, retracting pain shooting through the nipple. Menstruation had ceased six years before, without giving rise to any trouble. She had no *cachexia*, and was apparently in her usual health

On the twenty-third of April, 1883, the tumor then was of an oval shape, and about four inches in length. From its inner anterior surface were extending two cornua, slightly ulcerated, about three-fourths of an inch in length. The skin over the tumor was deeply congested, red and inflamed, as was also the skin for several inches around. The tumor in front rested upon the cartilages of the rib, but was movable. The glands in the axilla were slightly involved. The breast was removed under the spray on April 26, 1883, and Lister's dressing applied. One nodule of hardness was removed from the axilla. At the sternal end the cut surfaces could not be approximated within two inches, owing to the necessary ablation of tissue.

The case did well, and the temperature never rose above 99½°.

On and after May 10th, the wound was dressed with iodoform, cosmoline, and salicylated cotton, under which treatment the wound rapidly healed. Dr. Brubaker made a histological study of the growth, and pronounced it carcinoma.

As soon as the cicatrix was complete, neuralgic pains began to be felt in the left arm, right leg, and body. At first the cicatrix remained perfectly healthy in appearance. Subsequently, however, a nodule appeared in the lower part of the neck behind the left sterno-clavicular articulation. Next, the left axilla, the posterior and healthy part of the cicatrix began to show hardening. At present there is a chain of nodules along the whole cicatrix—one large and painful is felt over the cartilage of the third rib on the left side. The left axilla is one hard pyramid. The left hand and arm are swollen. A pain of a lancinating, burning character is referred to the left scapula, arm, and axilla, occasionally shooting in the course of the incision.

The apparent freedom from involvement of the axillary glands at the time of the operation, and the rapid development of the disease after the healing of the cicatrix, would seem to point to the idea that the original tumor was but a local nidus for a constitutional trouble, and that this having been destroyed, a general efflorescence of the disease ensued.

DR. BALDWIN said: I remember that the late Dr. Atlee spoke of the effects of arsenic in carcinoma, and gave a number of cases in which he used it with the apparent effect of preventing the return of the tumor. I employed it in a case on which operation was performed in 1875, the patient being put on the use of Fowler's solution, continued until 1876, when the growth redeveloped and a second operation was done in 1878; no return has occurred to this time. The use of arsenic was discontinued after the second operation. During the formation of the second growth some trouble occurred in the lung, and cancer of that organ was feared, but it disappeared after operation.

Dr. Forbes said: Dr. Leaman speaks of a period of efflorescence after operation, by which I understand a general development in different organs; this, as he remarks, does not always occur after the first operation. In 1864 I removed a cancer from the breast of a lady. In 1867 a hardened growth appeared in the cicatrix. It was not removed at once, as it was then giving no pain. In a short time, pain having developed, it was removed. It returned a number of times and was each time removed until it developed in attachment to the interosseous cartilage and the muscles, and then I declined to remove it, although the patient earnestly urged me to do so. It continued to increase, and in eighteen months it involved the integument on the clavicle and sternum. Its condition was much aggravated by various caustic applications. Finally some irregular parties attempted to remove parts of the diseased mass, and this was followed by an efflorescence and a number of organs in the thorax and abdomen became involved. The patient died eighteen months after the last attempted operation.

I have heard Dr. Geo. W. Norris speak of this condition of efflorescence and its likelihood to occur in patients upon whom the cauterizing and escharotic treatment had been practised. After such treatment he advised non-interference with the knife.

Dr. J. M. Barton said: Even when the knife does not cure, it may prolong life. Operation offers us ten per cent. of recoveries. In Dr. Leaman's, the almost immediate return in the axilla is suggestive of the possibility that some affected gland had escaped removal. The removal of the entire breast in the earlier stages gives chance of total recovery, and in the later stages, with ulceration, operation is also useful; but in the intermediate periods, when the tumor is extensive and adherent to the adjacent structures, non-interference is best.

Dr. Albert H. Smith said: I am glad to hear the repeated use of the knife advocated; I believe in attacking the tumor every time it appears, for, at the least, life may be prolonged and made comfortable, and the patient may be spared the suffering and loathsome discharges of the advanced stages of the disease, conditions which make her a source of misery to herself and to those around her. Cancer is doubtless a local disease, although a constitutional taint or tendency is probably inherited. Yet, if the tumor be removed early, a cure can be obtained. Removal of the breast should be complete; every reappearance should be met by operation. I recall the case of a patient from whom, at the first operation, no axillary glands were removed, but at the second twelve were taken out. Two more operations were subsequently performed; at the last one a very large amount of tissue was removed, but perfect union was obtained. Operation should cease when the condition is such that union by first intention cannot be obtained. In this particular I cannot agree with Dr. Gross, who pays no attention to the size of the cicatrix or the question of union by first intention. The patient just referred to has been well during this summer, but is now beginning to manifest infiltration, and the condition is such that primary union cannot be obtained, and I do not consider operation permissible. Under the modern advances in antiseptic surgery, operative interference in cases of cancer becomes simple and entails little suffering, and the after-treatment is not difficult.

Dr. Barton said: The important point in operation is to make a complete cleaning out of the affected glands, and the obtaining of this must not be interfered with by consideration of the amount of tissue to be removed, or by the desire for primary union. Where much tissue is removed, the after-treatment is more simple than where flaps are made; no counter-openings are needed; no drainage-tubes; no pockets of pus are formed; but little, if any, fever occurs; the wound usually goes on uninterruptedly to full cicatrization. In hospital practice I rarely have to see a case after operation, from which the breast has been thus removed. I cannot recall a case in which the disease returned in the cicatrix so formed, though it often returns in the axilla. I remember a case in which three operations were performed upon secondary axillary growths in a period of four years—the last operation being amputation of the arm, ligation of the axillary artery, and removal of the growth—yet the resulting cicatrix from the first thorough breast operation remained perfectly soft and healthy.

Dr. Leaman said: In my case the axilla was opened, and no glands were affected except the one removed. The first symptoms of return were shooting pains in the fingers, referable to a nodule near the insertion of the sterno-cleido-mastoid muscle, behind the left sterno-clavicular articulation. Subsequently the axillary glands were involved. A few small nodules have since appeared over the seat of the first tumor.

In my experience arsenic has not been of use in carcinoma.

A NEW USE FOR AN OLD INSTRUMENT.

Dr. Leaman called attention to the fact that he had found the hooked end of Dr. Gross's ear and nose instrument the best and safest means of rupturing the membranes in labor.

Dr. Wm. R. D. Blackwood then made some

REMARKS ON THE CHICAGO BEEF WIRE SKEWER.

He alluded to a report in the daily papers of a case of swallowing of one of the barbed skewers employed to fasten the labels on the Chicago slaughtered beef sold in this market. He exhibited one of these skewers, and it was readily seen that it would be well-nigh impossible to gulp down a morsel of meat large enough to hide this fastener.

The labels which are attached—one to each quarter only—are removed by the butcher before cutting up the meat, and could, even if allowed to remain, scarcely fail to attract the attention of both cook and eater.

NEW YORK COUNTY MEDICAL SOCIETY.

Stated Meeting, September 24, 1883.

The President, David Webster, M.D., in the Chair.

(Specially reported for The Medical News.)

The Secretary read a communication from John T. Metcalf, M.D., tendering his resignation of membership.

The next business in order was the

NOMINATION OF OFFICERS.

Dr. Austin Flint, Jr., said: At the request of a number of gentlemen, all of whom are interested in sustaining the National Code of Ethics, I am authorized to place before you the names of certain gentlemen, every one of whom will be an uncompromising supporter of the Code of Ethics of the American Medical Association.

The names have been selected carefully and with great deliberation. This ticket represents the Code of

Ethics of the regular profession. I wish all my friends to understand what it means. I wish them to comprehend what we believe an election of this ticket to mean, and I firmly believe it will be elected, viz., that an election of this ticket means a reversal of the action of the State Society, which has abolished, as you well know, the Code of Ethics of the American Medical Association, and made a Code of its own. These remarks are not made in a spirit of malice, and with no imputation to gentlemen who differ with us in this contest. As a matter of interest we cannot fail to understand what we believe to be a serious encroachment upon the honor of the profession.

I now nominate for *President*, Dr. T. Gaillard Thomas.

Dr. Frederick R. Sturgis said: The nominee is opposed to this Society, not being in affiliation with it. It remains for us to carry out the wishes of the State Society, and it will not be well to place ourselves in opposition to that Society. I therefore nominate for *President*, Dr. S. Oakley Vanderpoel to carry out a principle that the State Society has a right to control the County Society, and the County Society has a right to carry out the wishes of the State Society.

Dr. D. B. St. John Roosa said: We are perfectly well prepared for the organization from whose chief we have heard to-night, and with the consciousness which the gentleman gives us credit for, we are sure of being quite as regular as any member of the profession, and quite as much in sympathy with its defence; and our organization is not for any personal aggrandizement, and from only pure motives we set up a ticket of those who are opposed to the Code of Ethics of the American Medical Association. I therefore nominate for *Vice-President*, Dr. Andrew H. Smith; and for *Secretary*, Dr. Wesley M. Carpenter.

The complete list of nominees is as follows:

NATIONAL CODE.

President.—T. Gaillard Thomas.
Vice-President.—Charles A. Leale.
Secretary.—E. A. Judson.
Assistant Secretary.—P. B. Porter.
Treasurer.—Henry D. Nicoll.
Censors.—Charles McBurney, Charles S. Wood, Richard H. Derby, Charles Hitchcock, and Thomas H. Burchard.

NEW CODE.

President.—S. O. Vanderpoel.
Vice-President.—Andrew H. Smith.
Secretary.—Wesley M. Carpenter.
Assistant Secretary.—C. H. Avery.
Treasurer.—O. B. Douglas.
Censors.—David Webster, Daniel Lewis, F. R. S. Drake, Joseph W. Howe, and F. R. Sturgis.

The paper of the evening was read by Dr. R. B. Swinburne, and was on *Fungoid or Adenoid Growths of the Vault of the Pharynx.* The paper was discussed by Drs. Bosworth, Pomeroy, Curtis, and others.

CORRESPONDENCE.

TESTING URINE FOR ALBUMEN.

To the Editor of The Medical News.

Sir: Having been much interested in your recent editorials on the improved methods of examining urine, I beg to be allowed to add to them a description of an easy and quick way of performing the Heller test for albumen, with its modifications. A few lines on page 293, Vol. xliii., No. 11, of The Medical News, suggested to me the importance of mentioning it. As the sole objection to the picric acid test, you speak of the difficulty of overlaying a urine specimen of low specific gravity with the acid solution. When resident physician in one of the city hospitals, where I was called upon to make frequent and numerous tests for albumen in urine, my preference was for the Heller test, but owing to the difficulty of underlaying the urine with nitric acid, the sore trial of patience, and the time involved, to say nothing of the waste of acid, the staining of fingers, and sometimes of carpets, when in a hurry, I experimented for an easier way than the ordinary test-tube method. My plan at present—and it would do admirably, I should think, for the picric acid test—is to use in place of the test-tube a pipette of about twenty-eight mm. circumference; this is plunged into the urine; a small quantity taken up; then, while the free end is closed by the finger, it is plunged into the nitric acid, and the finger gently removed. As soon as a small quantity of the acid has entered, the end of the tube is again closed, and the whole removed and held over a test-tube while the ring is examined. Another advantage in favor of this method is that, while in the old way the thickness of the ring depended very much on the size of the tube and the delicacy with which the admixture was made, in this the standard is uniform.

Respectfully yours,
Granville Faught, M.D.

142 North Fifteenth Street,
September 27, 1883.

NEWS ITEMS.

CINCINNATI.

(*From our Special Correspondent.*)

The Medical Colleges of Cincinnati have taken a step in the interest of reform by commencing their regular sessions earlier than in former years. The experiment is well received, especially by advanced students, and it is hoped that a greater lengthening of the courses will be the result.

At the Medical College of Ohio, lectures began on Tuesday morning, the 18th inst., with nearly two hundred matriculants. The introductory address was delivered in the evening by Prof. J. G. Hyndman, of the Chair of Chemistry. His subject was "Medicine as a Science and a Profession." He showed the students that even in the present advanced state of medical science, there remains a wide field for investigation and research. Referring to the objection that certain branches now taught are too theoretical, and not sufficiently practical, he said that nothing is more certain to retard the advancement of science than the search for that only which promises immediate practical results. The utility of pure science is constantly cropping out at unexpected places. In conclusion, he urged the students to make diligent use of the facts collected by their predecessors in the profession, in order to be the better prepared for original work; for the physician who utilizes the past will be more instrumental in saving life than the one who contents himself with making a living out of the afflictions of humanity without the will or the power to advance the standard of his profession.

There was no preliminary course at the Ohio this fall, but the histological, pathological, and chemical laboratories have been in operation, with fully a hundred students at work, for about three weeks before the opening of the regular session.

The Miami College also opened its sessions on the 18th, and with encouraging prospects. The introductory address was delivered on Monday evening by Prof. J. C. Mackenzie, of the Chair of Theory and Practice; his subject, "Biology, or the Science of Life." The speaker considered briefly the various forms of life, and the difficulty of defining what we know as "life." In regard to the origin of life, he favored the Darwinian theory, believing it to be the best supported by scientific evidence, and the view adopted by the greatest scientists and naturalists of the time. In conclusion, he said that, while "The proper study of mankind is man," the student should not confine his studies to man. All life and all nature must be his teacher.

A New Medical School (?) has recently been granted a charter in this city. Its name is, The Medical University of Ohio. Its founders are some dozen men, as yet, to fame unknown. The charter grants remarkable latitude in the branches of instruction, but where the infant is cradled has not yet been revealed.

Counter-prescribing.—At a recent meeting of the Academy of Medicine, the Secretary was instructed to request the Cincinnati Medical Society and the Pharmaceutical Society to appoint a committee to confer with a similar committee from the Academy, with reference to counter-prescribing, advertising patent medicines, and other irregularities among the druggists of our city. The evils referred to are constantly practised by a majority of them, and, in some instances, with the most remarkable openness.

Yellow Fever.—Eighteen deaths from yellow fever occurred at Havana during the week ending September 15th.

Yellow fever is reported among the foreign residents at Ponce, Porto Rico.

One case of yellow fever is reported from the city of Mexico—an imported case.

Cholera.—At Calcutta there were eleven deaths from cholera during the week ending August 4th, and twelve for the week ending August 11th.

One death from cholera, during the week ending August 10th, is reported from Flushing, Netherlands.

The Sanitary Service in Panama.—The climate of the Isthmus of Panama has been frequently urged as an objection to the building of the canal, but the numerous reports concerning it appear to have been very much exaggerated. An official bulletin on the sanitary service of Panama says: "It is true, and we have never hesitated to declare it, that the climate of the Isthmus requires especial laws for the preservation of health, unrelaxed attention and great moderation in diet. Our agents have understood it, and healthfulness has been greatly improved, notwithstanding the number of employés has largely increased. Since the commencement of our work no real epidemic has appeared, the illnesses have been few and the cases seldom severe." In the month of May, 1882, when the number of employés was 2852, there were but 6 deaths, and in August, when there was the greatest mortality of any month in the year, and the number of clerks and laborers had increased to 2895, there were but 20 deaths; and in December, when the number reached 3898, but 9 deaths occurred. In January of the present year, there were employed about the canal 4901, and during the month the deaths numbered but 6, while in February, when the help aggregated 7804, there were but 11 deaths. In March, out of a total of 6131 persons employed, the mortality was 19; and in April, 14 out of a total of 6812. In order to meet any emergency a central hospital was erected on a well-selected site near the city of Panama, containing 275 beds. It consists of a group of buildings, the wards, each of 24 beds, being well separated and abundantly supplied with water. At Colon there is a hospital of 80 beds on the sea-coast. The administration of these hospitals has been confided to a benevolent commission, of which Monseigneur Paul, the Bishop of Panama, is president. The solicitude of the members of this commission and the devotion of the French Sisters of Charity secure to the sick the best of care. This main organization is supplemented by an infirmary at each post or section. In addition, on the Island of Taboga, in the harbor of Panama, an establishment has been erected for convalescents.

Medico-chirurgical College of Philadelphia.—Dr. William S. Janney has been elected Professor of Practical Anatomy and Clinical Surgery in this institution.

American Pork Investigation.—The New York Chamber of Commerce has named Prof. Charles F. Chandler as the most suitable expert for the purpose of investigating the pork packing interests of the country, with special reference to the dangers from trichinous pork.

An International Veterinary Congress was held at Brussels on September 10th–16th inst.

Dr. Brown-Séquard.—Dr. Brown-Séquard, who will be remembered as having been some years ago resident for a time in London, and as having delivered courses of lectures at the Royal College of Physicians and St. Bartholomew's Hospital, is now a candidate for the seat in the Académie des Sciences left vacant by the death of M. Cloquet. His varied and valuable researches prove that he merits the honor, though he cannot command it. They have, perhaps, contributed more than those of any other experimental physiologist to establish that proper appreciation of pathological phenomena which leads naturally to accurate diagnosis. Dr. Brown-Séquard is the first physiologist who demonstrated the constriction of bloodvessels when the nerves that innervate them are submitted to the influence of electricity, and who explained vascular dilatation and increased local temperature by paralysis of the parieties of the vessels. This explanation was verified by Claude Bernard, who discovered that on dividing the cervical branch of the sympathetic, these phenomena are present on the corresponding side of the head. Neither must it be forgotten that Dr. Brown-Séquard has especially elucidated the question of the pathogeny of epilepsy by his researches, and has furnished evidence that it is hereditary; also that spontaneous lesions may be inherited. Latterly, Dr. Brown-Séquard has especially studied phenomena manifested by the nervous system. It is to these researches that science owes the discovery that when a portion of the nervous system is irritated, or in a state of lesion, it exercises on distant organs an influence which Dr. Brown-Séquard calls inhibition. Thus, a lesion of the encephalon can determine an arrest of the functions of the spinal cord, or a lesion of the cord may arrest the functions of the brain. Before mentioning Dr. Brown-Séquard's investigations in another field of research, we must call attention, though they are well known, to those on the transmission by the spinal cord of sensory impulses, from which the principal conclusions to be drawn are that sensory impulses pass along the posterior and lateral columns, and are transmitted by the gray matter to the brain, which is the principal conductor of sensory impulses. Dr. Brown-Séquard's interesting researches on generalized anæsthesiæ resulting from irritation of the mucous membrane of the larynx by carbonic acid or chloroform, also those on a special kind of syncope resulting from the application of anhydrous chloral to the skin, may be classed among many others he has made with successful results, and will tend to solve many pathological problems, as they earn for him the right to all honors his French brethren can bestow on him.—*British Med. Journal*, September 15, 1883.

The Foot and Mouth Disease in England.—A correspondent of *The London Times* says that the foot and mouth disease is spreading alarmingly in Derbyshire, and that within the past week the returns for that county have almost doubled. Nine out of every ten farmers in Derbyshire are convinced that the disease is not carried in the air, but that the poisonous germs are conveyed by animals from herd to herd. In the treatment of the disease, careful and judicious nursing and attention seem to answer better than medicinal remedies. A diet of hay tea, oilcake, gruels, or linseed tea, varied with mashes and pulped roots, has been tried by some, and others, when the mouth of the animal is sore, place it in pieces of oilcake and slices of roots. Especially successful has been the simple process of washing the mouth of the cattle twice daily with a mixture of water, nitre, and tincture of myrrh. Complete rest on a dry floor and clean litter has, perhaps, superseded all remedies for the feet. There has been an increase of 39 in the number of places infected, and of 393 in the number of cattle attacked by the disease within the past week. *The Times* has also received discouraging accounts of the rapid spread of the disease from Cheshire, Denbighshire, Yorkshire, Lincolnshire, Leicestershire, Buckinghamshire, and other counties.

Health in Michigan.—Reports to the State Board of Health for the week ending Sept. 15, 1883, indicate that influenza, remittent fever, and tonsillitis have increased, and that cholera morbus, typhoid fever, and diarrhœa have decreased in area of prevalence.

Including reports by regular observers and by others, diphtheria was reported present during the week ending Sept. 15, and since, at fourteen places, in Argentine, Berrien Springs, Bingham, Detroit, Grand Rapids, Hastings, Holly, Hobert, Ida, Kalamazoo, Lansing, Mt. Pleasant, Pontiac, and Somerset. Scarlet fever at fifteen places, in Detroit, Charlotte, Elk Rapids, Grand Rapids, Howard City, Ithaca, Lansing, Middleville, Morenci, Nashville, Negaunee, North Adams, Port Huron, Sunfield, and Woodland. Measles was reported at three places, in Detroit, Ithaca, and Jerome.

Obituary Record.—Prof. Ritter von Rittershain, editor of the *Prager Medizinische Wochenschrift*, and Professor of Diseases of Children in the University of Prague, has recently died in that city. For many years he has been known as an authority in diseases of children, and especially in rickets, to the literature of which subject he was a valuable contributor.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM SEPTEMBER 17 TO SEPTEMBER 24, 1883.

Campbell, John, *Lieutenant Colonel and Surgeon, Medical Director, Department of the South.*—Granted leave of absence for fifteen days.—*Par. 2, S. O. 94, Department of the South*, September 13, 1883.

Alexander, Charles T., *Major and Surgeon.*—On being relieved from duty at the U. S. Military Academy, October 1, 1883, to report in person to the Commanding General, Department of the Missouri, for assignment to duty.—*Par. 7, S. O. 211, A. G. O.*, September 14, 1883.

Gibson, Joseph R., *Major and Surgeon.*—Relieved from duty in the Department of the East, October 1, 1883, and to report by letter to the Commanding General, Department of the South, for assignment to duty.—*Par. 7, S. O. 211, A. G. O.*, September 14, 1883.

Alexander, Charles T., *Major and Surgeon.*—Granted leave of absence for four months, from October 1, 1883.—*Par. 1, S. O. 213, A. G. O.*, September 17, 1883.

Horton, Samuel M., *Major and Surgeon.*—Relieved from duty in the Department of the Platte, October 1, 1883, and to report in person to the Commanding General, Department of the Missouri, for assignment to duty.—*Par. 7, S. O. 211, A. G. O.*, September 14, 1883.

Meacham, Frank, *Major and Surgeon.*—Relieved from duty in the Department of the East, October 1, 1883, and to report in person to the Commanding General, Department of the Platte, for assignment to duty.—*Par. 7, S. O. 211, A. G. O.*, Sept. 14, 1883.

Smith, Andrew K., *Major and Surgeon.*—Relieved from duty at Willet's Point, New York, October 1, 1883, and assigned to duty at U. S. Military Academy, West Point, New York.—*Par. 7, S. O. 211, A. G. O.*, September 14, 1883.

Taylor, Morse K., *Major and Surgeon.*—Relieved from duty in the Department of the East, October 1, 1883, and to report in person to the Commanding General, Department of the Missouri, for assignment to duty.—*Par. 7, S. O. 211, A. G. O.*, September 14, 1883.

Wolverton, William D., *Major and Surgeon.*—Relieved from duty in the Department of Dakota, October 1, 1883, and to report in person to the Commanding General, Department of the East, for assignment to duty.—*Par. 7, S. O. 211, A. G. O.*, September 14, 1883.

Appel, Daniel M., *Captain and Assistant Surgeon.*—Relieved from duty in the Department of the Missouri, October 1, 1883, and to report in person to the Commanding General, Department of the East, for assignment to duty.—*Par. 7, S. O. 211, A. G. O.*, September 14, 1883.

Munn, Curtis E., *Captain and Assistant Surgeon.*—Relieved from duty in the Department of the Missouri, October 1, 1883, and to report in person to the Commanding General, Department of the East, for assignment to duty.—*Par. 7, S. O. 211, A. G. O.*, September 14, 1883.

Merrill, James C., *Captain and Assistant Surgeon.*—Relieved from duty in the Department of Dakota, October 1, 1883, and to report in person to the Commanding General, Department of the East, for assignment to duty.—*Par. 7, S. O. 211, A. G. O.*, September 14, 1883.

Maus, Louis M., *Captain and Assistant Surgeon.*—Relieved from duty in the Department of the Missouri, October 1, 1883, and to report in person to the Commanding General, Department of Dakota, for assignment to duty.—*Par. 7, S. O. 211, A. G. O.*, September 14, 1883.

Price, Curtis E., *Captain and Assistant Surgeon.*—Relieved from duty in the Department of the East, October 1, 1883, and to report in person to the Commanding General, Department of Dakota, for assignment to duty.—*Par. 7, S. O. 211, A. G. O.*, September, 14, 1883.

Patzki, Julius H., *Captain and Assistant Surgeon.*—Relieved from duty in the Department of the South, October 1, 1883, and to report in person to the Commanding General, Department of the East, for assignment to duty.—*Par. 7, S. O. 211, A. G. O.*, September 14, 1883.

Shannon, W. C., *Captain and Assistant Surgeon.*—Assigned to duty at Fort Bridger, Wyoming.—*Par. 3, S. O. 102, Department of the Platte*, September 19, 1883.

Vickery, Richard S., *Captain and Assistant Surgeon.*—Relieved from duty in the Department of the Platte, October 1, 1883, and to report in person to the Commanding General, Department of the Columbia, for assignment to duty.—*Par. 7, S. O. 211, A. G. O.*, September 14, 1883.

Weisel, Daniel, *Captain and Assistant Surgeon.*—Relieved from duty in the Department of the East, October 1, 1883, and to report in person to the Commanding General, Department of the Platte, for assignment to duty.—*Par. 7, S. O. 211, A. G. O.*, September 14, 1883.

Appel, Aaron H., *First Lieutenant and Assistant Surgeon.*—The leave of absence granted July 20, 1883, extended one month.—*Par. 10, S. O. 211, A. G. O.*, September 14, 1883.

Brewster, William B., *First Lieutenant and Assistant Surgeon.*—Granted leave of absence for two months, from October 1, 1883, with permission to apply for an extension of four months.—*Par. 1, S. O. 107, Military Division of the Missouri*, September 15, 1883.

Strong, Norton, *First Lieutenant and Assistant Surgeon.*—Now on duty in the field near Fort Thornburgh, Utah, to accompany command to Fort Douglass, Utah, and there await further orders.—*Par. 2, S. O. 101, Department of the Platte*, September 17, 1883.

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ORIGINAL LECTURES.

BLOODLETTING.[1]

A Clinical Lecture.

BY PROF. DUJARDIN-BEAUMETZ,

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GENTLEMEN: From a medical point of view there is no history more interesting alike to philosopher and physician than that of bloodletting. It is a history replete with useful lessons. We see there illustrated the truth that when the spirit of system and of routine takes possession of a philosophical or medical doctrine, the results are distorted and misinterpreted, and the practical outcome is barren of good fruits and baneful. If, moreover, the word of the master is worthy of respect, hot-headed enthusiasts who urge to riot and madness every good measure are always to be distrusted; finally, enlightened observation and the true scientific spirit ought continually to submit to the test of the experimental sciences the data furnished by tradition.

We are ignorant of the origin of bloodletting; we only know that it was in use at the dawn of our historical era. Eleven hundred years before Christ, Podalirius is said to have practised it at the siege of Troy. It is probable that it was already in vogue among nations where civilization was more advanced, and that in Egypt, India, and China bleeding was a recognized therapeutic measure.

However this may be, Hippocrates, in his writings, speaks of bloodletting and its indications. Afterwards Aretæus and especially Galen insist on the importance of bleeding, and thenceforth down to the seventeenth century venesection was practised in accordance with the principles which Hippocrates and Galen had laid down. It was as much as ever, if during this long space of time certain opponents, Van Helmont and Porcius in particular, dared lift their voices in protestation against the abuse and the uselessness of bloodletting.[2] They were, however, little heeded, and the majority ranged themselves on the side of Botalli, who compared diseased blood to stagnant water in a well, which becomes more and more pure the more you take out. It is precisely so, said Botalli, with the blood and with bloodletting.[1]

It was, however, in the seventeenth century that phlebotomy attained its zenith, becoming in France, as in England, the unique system of treatment of all diseases—children and old men alike were bled; the new-born babe was not even spared, and blood was taken by *quarts*. Guy Patin bled his *confrère* and friend Mentel thirty-six times in succession, and caused himself to be bled seven times for a simple cold. Pitcairn drew more than five kilogrammes from a rheumatic patient, and Gregory, for a pleurisy, gave issue to more than six kilogrammes. Medicine at this epoch was reduced to these three great elements: purgings, bleedings, and clysters; and the response of the bachelor in the immortal comedy of the *Malade Imaginaire* is in exact conformity to the prevalent practice of the epoch, when he replies to all the questions propounded to him by these three lines—

Clysterium donare,
Postea seignare,
Ensuita purgare.

When one thinks of the prodigious number of purges ordered, the enormous quantity of lavements administered, and the sanguinary floods which phlebotomy produced in this and the succeeding epoch, one can but exclaim with Bouley, physician to the Hôpital Necker, in view of such heroic medication: "A sick person has more vital resistance than one would think!"

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[1] Translated from advance sheets by E. P. Hurd, M.D., of Newburyport, Mass.

[2] The following passage from one of the writings of Hippocrates makes particular mention of bloodletting: "A patient had borborygmi and pain; had taken emetics without relief; was bled by turns from each arm to syncope, and got well."

From the time of Hippocrates, bloodletting has given rise to very many discussions; nevertheless, owing to the influence of Galen and Celsus, who were for ages the teachers in medicine, bleeding was adopted as a treatment applicable to a great number of complaints. Galen made the following reservation: not to bleed children under four years of age, and rarely to bleed old people.

It was in the seventeenth century that the contest between the adversaries and the partisans of venesection took on the most vehemence, and a perfect furor for letting of blood seized certain physicians. Guy Paton was the most ardent of these enthusiasts. He bled his *confrere* Mentel thirty-two times consecutively, and bled himself seven times for a cold. He would bleed infants at the breast, and even aged people.

Chirac went further, if possible, than Guy Paton, and to him is ascribed that celebrated utterance, "Smallpox, I will make you used to the lancet."

Pitcairn boasted of having drawn twenty English pounds of blood from a patient affected with acute articular rheumatism.

Tweedie, in a case of pericarditis, took first 421 grammes, then 720 grammes, then 960, then 1200, and finally 1440, before the patient was relieved.

Gregory caused a pleuritic patient to lose 5520 grammes in the course of several days.

There was a revival of excessive bleeding under the influence of Broussais at the beginning of this century, and Bouillaud, with his bleedings, "blow after blow" (*coup sur coup*), was the last representative of this period, which Schneider has characterized as the period of *hæmatomania*.

The ancients practised phlebotomy with various instruments; generally, a spear-pointed fleam, called *fossorium*, was thrust into the vein. This instrument is still used by veterinary surgeons when they bleed horses. One of these *fossoria* was found in the ruins of Pompeii.

They also used an instrument called *scalpellus*, with which they opened the vein. Galen employed a cutting implement which he described under the name of *phlebotomon*. Albucasis made use of all three kinds, the *scalpellus*, the *fleam*, and the *phlebotomon*.

The words *lance* and *lancet* were not introduced into surgery till about the year 1200 (Journal, Considerations Relative to General Bloodletting, 1867; Brichetan, Bloodletting, Its Physiological Effects and Therapeutic Indications, Bull. de Thér., lxxv. p. 261, 1868; Article, Saignèe, in Dict. Encyclop. des Sciences Méd.; Sanceritte, Bull. de Thér., li. p. 145).

[1] Botalli was a physician of the University of Paris; afterwards (from 1571), physician to Charles IX. His controversy with the faculty, and in particular with Donatus, has become famous. The latter reproached him with the hardihood of his bloodlettings. He was one of the greatest partisans of phlebotomy. He bled all his patients to excess, basing himself on the principle which he enunciated to his friend Etiénne Pasquier: "The more you withdraw of stagnant water from a well, the more of pure water flows in to take its place. The more the wet-nurse is sucked by the infant, the more milk she has; the like holds good with blood and bloodletting." (Etiénne Pasquier, Lettres liv. xiv., lettre 19.)

This mania for bloodletting, after having abated for a number of years, burst forth with new ardor at the commencement of the nineteenth century, and Bosquillon with his humoral ideas, Broussais with his physiological doctrine, Bouillaud with his system of bleedings, *blow upon blow* (coup sur coup), gave a new *eclat* to the practice of phlebotomy. Then the zeal by degrees died away again, and it may be truly said that to-day the prescription of a phlebotomy is an exceptional thing in the practice of our hospitals, and it is as much as ever if I order one or two bleedings a year. Peter has indeed made some attempts the last few years to show the evil consequences of so complete an abandonment of this therapeutic measure. We will now see by the most recent data of experimentation if the favor which bloodletting once found and its present abandonment are susceptible of justification.

We ought here to divide our subject into two parts, and study in particular the action of general bloodletting, and that of local bloodletting. We ought also under each of these heads to examine successively the operative procedure, the physiological effects, and lastly the indications and contra-indications of general and local bloodletting.

General bloodletting (called also venesection, phlebotomy) is practised, as you know, at the bend of the elbow; and although in my audience there are doubtless many who have never bled a person, or seen one bled, I need not now take up your time in describing the operation, which you will find in full detail in any text-book on minor surgery. This ignorance of the manual procedure is quite pardonable in anybody, considering how very seldom bleeding is practised in even our large hospitals.[1]

What are the physiological effects of bloodletting? Here we have to study the effects of bleeding on the circulation of the blood, and on the blood itself, and the modifications which supervene in the functions of the different organs of the economy.

The blood is profoundly altered by bloodletting, and we must examine successively the modifications of the globules, and of the serum. In treating the globules, we are to consider the changes in the red corpuscles, the leucocytes, and the hæmatoblasts.

Hayem has shown us in his admirable work on the modifications of the blood, from which I derive the principal data of this lecture, that every loss of blood, however trifling, and though not exceeding 1.75 per cent. of the weight of the body, produces a diminution in the number and quality of the globules which persists from ten to twenty days. When the hemorrhage is large, or when the bleeding is often repeated (*coup sur coup*), the diminution of the globules continues and even augments during the eight days which follow the operation. But that which it is important to note, is that in proportion as the globules are destroyed, others are produced with extreme rapidity. The number of the hæmatoblasts also augments after each bleeding, and in a marked manner; this it is which has led Hayem to say that every hemorrhage inevitably causes a *hæmatoblastic crisis*. This reproduction is even so rapid in certain animals, as the dog, that it is difficult to produce in them a persistent anæmic state by bleedings of moderate intensity, even if frequently repeated.

As for the leucocytes, Weber and Bauer maintain that they augment with losses of blood; Hayem affirms, on the other hand, that it is not so, and that their number remains the same after as before the emission of blood.

The modifications effected in the blood-plasma are less known than those of the globules. Thus, while Prévost, Dumas, and Jürgensen allege that there is augmentation of albumen, Becquerel and Rodier maintain that there is diminution. There is the same dispute with regard to the fibrin; White, Andral, Gavarret, Schutzenberger, Nasse, Sigmund, Mayer, Jürgensen, assert that fibrin is increased; Magendie, Coze, Hirtz, Brücke, affirm a decrease; Hayem is of the opinion of the first-mentioned experimenters, and according to his numerous researches there is a positive increase of fibrin after each bloodletting.

As for the plasma, note that Arsonval has always found peptones in the serum after copious bleedings; this is a fact of great importance, and shows the modifications effected in nutrition by phlebotomy, the peptones being the result of a veritable *autodigestion* provoked by each bleeding.[1]

This same modification in the nutrition is still further indicated by the diminution in the quantity of gases dissolved in the blood. Lothar, Meyer, Mathieu, Urbain, Vinay, and Noil, have in fact observed a decrease in the quantity of carbonic acid, and especially in that of oxygen.[2]

Bleeding has also an influence on the circulation. It at once modifies the pulse, and here, too, Hayem has shown us these modifications in the frequency, force, and form of the pulse. We must here distinguish the effect of one bleeding from that of several, and this distinction should always be made when the physiological effects of blood emissions are to be studied. When there has been but one bleeding, the pulse, half an hour afterward, becomes slowed; when on the contrary there have been repeated bleedings, the pulse augments in frequency in a sensible manner; in augmenting in frequency it diminishes in force, and its form takes on that which is observed in cases of anæmia or aortic insufficiency. The ancients attached great importance to this action of bloodletting on the pulse; they maintained that bleeding *raised the pulse*. One can readily understand, to-day, that this increased amplitude of the pulse results not from the greater energy of the circulation, but from the diminution of the vascular tension in consequence of the loss of blood.[3]

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[1] Phillipart, of Tournay, has protested against the abandonment of bloodletting. He insists that the profession, in forsaking venesection, have gone too far, and that it is needful to return to this ancient mode of treatment in acute diseases. *Apropos* of the neglect of bloodletting, he cites some curious facts—namely, that the physicians of hospitals attached to the Central Bureau in the year 1867 prescribed bleeding but twice out of 8000 consultations, while in 1852 it was prescribed 1259 times. (Phillipart, on Bloodletting in the Treatment of Acute Diseases, Bull. de l'Acad. de Méd. de Belgique, 1883, t. xvii. p. 128.)

[1] D. Arsonval, On the Constitution of Blood after Hemorrhages (Gazette Méd., 27 March, 1880, p. 164).

[2] L. Meyer, Die Gase des Blutes (Zeitschr. f. pract. Med., Bd. viii. s. 256, 1857).

Vinay, On Bloodletting in Acute Diseases (Thèse de Paris, 1880, etc.).

[3] Hayem has remarked, after one bleeding, increase of pulsations during the operation, but this increase ceases half an hour afterward. When the hemorrhage is mortal, the pulsations increase at first, then diminish, and become irregular at the moment of death.

In the case of repeated venesections, the augmentation of pulsations becomes more and more marked with each bleeding, as is seen by the following table.

Before first bleeding, . . .	122	pulsations	per minute.
During " " . . .	164	"	"
One-half hour after first bleeding, .	149	"	"
Immediately " " " .	180	"	"
Before second bleeding, 24 hours later,	148	pulsations	per minute.
During " " " "	204	"	"
Immediately after second bleeding, 24 hours later, ...	189	"	"
One-half hour after second bleeding, 24 hours later, ...	209	"	"

These modifications of the pulse are subordinate to the disturbance occasioned in the blood-pressure. For it is now admitted by all experimenters—Volkmann, Navrotky, Gatzirck, Vorm-Muller, Vinay, Hayem—that hemorrhages diminish the blood-pressure; but in order that this diminution may be effected and maintained, considerable losses of blood are required, for as Vinay and Arloing have shown, these circulatory depressions disappear with great rapidity. This diminution in pressure is accompanied with a swifter blood-current, but on condition always that the hemorrhage has not been too considerable.[1]

These circulatory modifications give rise to troubles more or less profound in the functioning of the different organs. The respiratory movements, at first slowed, become more frequent, and more tumultuous in proportion as the hemorrhage becomes more considerable. Nevertheless, when the blood loss is moderate in amount, the dyspnœa is diminished, and this it is that explains the relief experienced by most patients affected by pulmonary diseases after bleeding. These respiratory troubles are connected with the perturbations caused in the functions of the nervous system by bloodletting.[2]

This *rôle* of the nervous system renders more complex than one would suppose the question of the physiological effects of bloodletting. Since we have learned the existence of the vaso-motors we are obliged to assign to the nervous influence modified by the hemorrhage, a part quite as important as we ascribe to the direct effect of the loss of blood on the mechanical and physical conditions of the circulation.

We ought also to attribute to this double influence the action of bleeding on the temperature.[1]

Bleeding lowers the animal heat, and this in the normal as well as in the pathological state. It even seems to me that we have not of late years insisted enough on the therapeutic value of this powerful antithermic means. I know of none more active or more efficacious, and in contemplating what sometimes takes place in certain pyrexias, as typhoid fever, one is tempted to ask if it would not be well to return to the practice of bloodletting, after the manner of our fathers. This is what happens with our typhoid patients; when in the course of this disease a moderate hemorrhage appears, you see immediately the thermometric curve fall, and this lowering of temperature long persists. I know that this benefit is obtained at the expense of a convalescence often long and painful, but the fact none the less remains that, placing ourselves exclusively on the stand-point of hyperpyrexia, bleeding is a powerful depressant of this high temperature, and I am astonished to see an attentive observer like Lorain consider this fever-fall as transient and illusory.

Bleeding acts not only on the circulation, on the respiration, on the nervous system, on the temperature; it modifies the organism in its entirety, and the conditions of nutrition even.

Every abstraction of blood, as Lepine, Bauer, Claude Bernard, and especially Hayem, have shown, energizes the nutritive movement; but this activity produces, if the bleedings are prolonged, a fatty transformation of the different organs, and particularly the heart, and this is a point which must not be lost sight of.[2]

If, then, I were to sum up the physiological effects of bloodletting, and with special reference to its pathological applications, I would say: Sanguineous losses of medium intensity diminish the number of globules and raise the pulse, while they enfeeble the blood-tension; they also lower the temperature; their effects, however, are generally temporary, for the reason that they provoke a hæmatoblastic crisis, which tends to bring back the blood to the state in which it was before the hemorrhage, and if the latter be often repeated, the hæmatopoietic formations exhaust the organism, and speedily produce grave disorganizations in the different viscera.

Local bloodletting has general effects analogous to general bloodletting, but it has local effects quite different. The mode of performance of these local abstractions of blood is very variable; sometimes we open the vein directly, sometimes we have recourse to mechanical means, as wet cups, or we employ leeches.

Before third bleeding, 3 hours later, .	188 pulsations per minute.
During " " " " .	240 " "
Immediately after third bleeding, 3 hours later, ...	220 " "
One-half hour after third bleeding, 3 hours later, ...	220 " "

As for the force, Vinay from his experiments concludes that the force of the pulse diminishes with acceleration of the pulse, and this is the rule in bleedings of moderate intensity. In fine, as to the form, after abundant hemorrhages the character of the pulse is like that observed in aortic constriction and insufficiency. (Hayem, Modifications du Surg., p. 177. Vinay, Des Emissions Sanguinés dans les Maladies Aiguës, Thèse de Concours, 1880, p. 25.)

[1] According to Volkmann's table, the normal vascular pressure being 155, a bleeding of 2 per cent. of the weight of the body reduces the blood-pressure to 56, and one of 3 per cent to 30. Vinay and Arloing have established the following laws:

1. That venesection produces immediately a considerable lowering of blood-pressure in the arteries.
2. That equilibrium is reëstablished with great rapidity.
3. That copious bleedings effect great oscillations of pressure.

According to Hayem, the lowering of pressure is not progressive. Scarcely appreciable in the first fifth of a mortal hemorrhage, it is between the first and second fifth that the diminution takes place the most rapidly. It is inappreciable in the last stages of the hemorrhage.

According to Vinay, small or medium sized hemorrhages are accompanied with a more marked irrigation of the tissues, but when the loss becomes more considerable the course of the blood changes, and is slowed. (Volkmann, Hemodynamik, 1850; Vinay, op. cit., p. 21; Hayem, op. cit., p. 162; Gatzirck, Centralbl. f. d. Med. Wissensch., No. 53, p. 883, 1871.)

[2] Lichtenstein has remarked a diminution in the number and profundity of the respirations following medium hemorrhages. Bauer has arrived at the same results, but when the hemorrhage is more considerable, this diminution gives place to augmentation. In the experiments of Hayem the respiratory movements augment and become more and more irregular in proportion as the hemorrhage continues.

These modifications result from the anæmia of the spinal cord produced by the loss of blood. (Lichtenstein, Zeitschrift f. Biologie, Bd. vii. 2 Hft. Bauer, Geschicht des Aderlasses, München, 1870; Hayem, op. cit.)

[1] In animals a lowering of temperature is observed after hemorrhage. The experiments of Marshall Hall, of Bœrensprung, of Gatzirck, and of Hayem, were absolutely demonstrative of this; in man the pathological temperature falls also. At the same time Thomas and Lorain have considered this fall as transient and illusory. (Gatzirck, Centralbl., 1871, p. 53; Bœrensprung, Müller's Archiv, 1851, p. 126; Hayem, op. cit.)

[2] Experimentally, under the influence of bloodlettings, instead of obtaining a slowing of the nutritive exchanges, there is an acceleration; the experimental researches of Lepine prove this. According to Claude Bernard, bleeding has a constant effect to accelerate and provoke the organic exchanges. Bauer has studied experimentally on animals the action of bloodletting on nutrition, and he proves by the examination of the urine, as well as by that of the gases of respiration, that there is exaggeration of the phenomena of denutrition and accumulation of fatty matters. He insists especially on the augmentation of urea, which is produced immediately after the bleeding, and which persists for several days. According to him, bleeding causes not simply a loss of fluid pabulum, but a real alteration of the organs and tissues. There is also a perturbation of nutrition under the influence of repeated bleedings, characterized especially by fatty transformation of the organs, and in particular of the heart, as Perl has shown. (Lepine, Soc. de Biologie, 1880; Perl, Virchow's Archiv. 1873, pp. 39-51; Bauer, Zeitschrift f. Biologie, viii. Bd., 4 Heft, Munich, 1872.)

Local bleeding, properly so called, that is, the opening of certain veins by the lancet, has fallen into greater desuetude than venesection at the bend of the elbow. Nevertheless, latterly, Arango, Chaparr, Mestivier, and especially Aran, have endeavored to revive the old practice, vaunted by Hippocrates, Galen, and Alexander, of Tralles, of bleeding from the ranine veins of the tongue, while Seutin, Cruveilhier, and Denucé have proposed to take blood from the nasal mucous membrane, thus going back to another ancient practice. At the present day, despite these tentatives, local venesections are abandoned, and we have recourse only to leeches and wet cups.[1]

Cupping is to day very much in use, in spite of our repugnance to let blood, and you see it employed in a considerable number of affections, and in particular in ocular therapeutics.

Here, as in the case of venesection, I refer you to your manuals of minor surgery for the details of the operation, reminding you only that under the name of *pneumodern*, Montain, of Lyons, and, under the name of *terabdele*, Damoiseau, have devised cupping apparatus similar to those which Heurteloup and, more recently, de Wecker devised and use in inflammatory affections of the eye, and which are veritable artificial leeches.

As for leeches, they render us daily great service, although we have much restricted their usage. The application of these leeches, the hemorrhages which result, the means of augmenting the flow of blood, or of arresting it—these are points with which you are all familiar, and which you learned at the commencement of your medical studies.

I will now show you what are the physiological and therapeutical effects of local bloodletting—effects which, in some respects, surpass those of general bleeding.

Local bloodletting, whether by scarifications, by cupping, or by leeches, has a double action—a general effect and a local effect. When it results in an abundant loss of blood, it produces the same modifications as general bloodletting; the pulse rises, the blood-pressure falls, and the temperature is lowered. The most marked effect, however, and the one most often sought, is the local action, and this is determined in part by the hemorrhage, and in part by a revulsive influence provoked by the local pain.

As for the hemorrhage, the anæmiating action takes place not solely at the point where you apply the leeches or the cups, but it extends more or less far. Despite the affirmations to the contrary of Binz and Struthers, I persist in thinking with Johnson that a considerable area may be exsanguinated by the local bleeding, and this owing to the vascular communications which unite certain organs to certain points of the skin; owing also to the intimate connections of the cutaneous nervous filaments, which hold under their dependence the vaso-motor innervation of organs situated more deeply.

The *rôle* of the local pain determined by the punctures is as important as that of the hemorrhage. We have here, first of all, a substitutive effect, then a vaso-motor action. We know, in fact, and on this point I insisted when considering the revulsive method in its application to the treatment of diseases of the spinal cord, that revulsion produced in any point of the skin causes anæmia of organs more or less deeply situated. Hence it is that local bloodletting has remained one of our most powerful therapeutic agents to combat the element congestion and the element pain, and especially the association of these two elements.

I come now to the most delicate and difficult part of my subject—namely, the indications for bloodletting, general and local. We will begin with the first.

If you reconsider the physiological effects of bloodletting, you observe that these effects are very transient, and cannot be persistent, except on condition either that your bleeding be exceedingly abundant, or frequently repeated, *coup sur coup*, after Bouillaud's fashion and that of the ancient phlebotomists. While, therefore, these repeated venesections undoubtedly do produce durable results, it is necessary to keep in mind that, despite the hæmatoblastic crises which they determine, they are followed by a persistent anæmia, and, what is especially worthy of being remembered, by a tendency to fatty degeneration of different viscera; and one may well ask if the inconveniences and the dangers which result from this double pathological state do not far more than counterbalance the feeble benefits which are obtained from these abstractions of blood, so that to-day, all these facts being well weighed, every body is agreed to solicit from phlebotomy only the transient effects which it can produce, and to resort to it only for relief of active and passive congestions of different organs.

There is especially one pathological condition where this depletion—temporary as it may be—of the circulatory system, by bleeding, may render us some service. It is when we have to do with those pulmonary congestions which are accompanied with asystolism, and especially those which are not linked to fatty degeneration of the heart. You understand how, in these asphyxiating periods of cardiac affections, a temporary depletion is sufficient to enable the heart to recover its habitual rhythm.

In the phlegmasiæ, properly so called, after the congestive period has gone by, and the exudation has formed, bloodletting can have little or no influence, as I explained to you when on the treatment of inflammation of the lungs.

Impotent to arrest the march of an inflammation, bleeding may nevertheless act the part of a prophylactic in these phlegmasiæ, and if experimentation in animals does not sufficiently explain these facts, clinical experience, and especially clinical surgery, shows us again and again the happy influence of general bloodletting in averting the inflammatory accidents which traumatisms determine. Hence it is that bloodletting, seldom employed in clinical medicine, is still utilized in clinical surgery.

In the treatment of the essential fevers, bleeding can have only antipyretic effect, and I shall have more to say of this when I come to fevers. This antithermic action is purchased at the cost of a profound trouble inflicted on the economy, nor, for all that, is the course of the febrile phenomena affected thereby. The doctrine of microbes which, in our day, plays so important part in the pathogeny of the infectious diseases, explains for us sufficiently the impotence of bloodletting in these pyrexiæ, since the removal of blood can in no way prevent the development of these micro-organisms in the mass of the circulating fluid.

Bleeding is indicated much more in the inflammatory fevers, or, at least, in those which accompany local inflammation—fevers which present often a great elevation of temperature, as pneumonia. When we refer to the physiological effects of bloodletting, it is easy to understand the ancient popularity and universality of this therapeutic measure, since, directed to an affection which, by its normal evolution, tends toward recovery, it relieves the oppression of the patient, lowers the temperature, and gives a marked elevation to the pulse. But our predecessors were ignorant of the price which they paid for this passing amelioration.

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[1] Mestivier, On Bleeding from the Ranine Veins in Diseases of the Pharynx (Bull. de Thérap., t. 52, p. 12, 1857); Arango, Treatment of Quinsy by Bleeding from the Ranines (La Union, Jan. 1883); Chaparr Gaz. hebd. de Méd., April, 1855); Aran, Bleeding from the Ranine Veins in Diseases of the Larynx and Pharynx (Bull. de Thér., t. 52, p. 105); Denucé, Bleeding Practised from the Nasal Mucous Membrane (Journ. de Médicine de Bordeaux, August, 1856).

Nevertheless, in certain cases of blood-poisoning, obscure in their nature, bleeding has a happy influence. Thus in the eclampsia of puerperal women general bloodletting, practised heroically, has arrested the convulsions, and all authorities seem unanimous in recommending venesection in these cases, although we are unable to explain the curative action of this spoliative treatment. You see then, gentlemen, that general bloodletting is indicated only in eclampsia and in certain congestive states, especially such as arise from temporary perturbations of the cardio-pulmonary circulation, and that even here the relief obtained from the depletion is only momentary.

Local bloodletting, by its double action in producing revulsion and opposing congestion, has applications to therapeutics which are much more numerous, and it is a very common practice to resort to this method in painful congestive affections. Thus in the pain which accompanies pneumonia and pleurisy, cups and leeches may give relief; in congestions of the spinal cord, of the kidneys, of the liver, and of the uterus local depletions often prove useful. As in local bloodletting the revulsive effects are more powerfully remedial than those resulting from the loss of blood, you understand the superiority of wet cups over leeches, and they are therefore more in use.

Such are the considerations which I wished to present relative to bloodletting, and which show the mediocre but useful *rôle* which this therapeutic means is destined in the future to fulfil. They will, moreover, help to convince you that, notwithstanding the opposition which we have been called to witness against bleeding in all its forms, and the decadence into which it has fallen, it ought not to be completely abandoned.

ORIGINAL ARTICLES.

THE INTRA-PERITONEAL METHOD OF TREATING THE PEDICLE IN OVARIOTOMY,

WITH A REPORT OF SOME EXPERIMENTS MADE BY

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[*Read before the American Surgical Association.*]

I wish to call the attention of the Fellows of the Association to some experiments which I have made, in connection with Dr. Morris Longstreth, on the intra-peritoneal method of treating the pedicle by the ligature after ovariotomy, and to make a few remarks upon the various methods of treating the pedicle.

As is well known, the first operation for the removal of ovarian cyst was performed by Dr. Ephraim McDowell, of Kentucky, in 1809. In this operation the pedicle was secured by a ligature, one or both ends of which were drawn through the incision in the abdominal wall and placed outside. In this way the pedicle was drawn up and placed in contact with the abdominal incision.

In 1821, Nathan Smith, of New Haven, Conn., according to the statement of Peaslee and others, ignorant that the operation of ovariotomy had been performed, ligated the pedicle in this way, *i. e.*, he ligated all the vessels of the pedicle separately, using for that purpose animal ligatures in the form of strips of kid-glove. He ligated the vessels, cut the ends of the ligatures close to the knots, and returned the pedicle to the abdominal cavity. This is the first instance of ligation of the vessels of the pedicle, and also the first instance in which the ligature was cut close to the knot and the pedicle returned to the abdominal cavity with the ligatures in position.

Torsion was afterwards performed—torsion of the vessels separately, torsion of the pedicle *en masse*.

Later, in 1860, Mr. Simpson, of Edinburgh, suggested the use of the acupressure needle for the purpose of constricting the pedicle. In 1858, John L. Atlee, of Lancaster, Pa., used the écraseur in that way, dividing the pedicle and crushing the vessels. Baker Brown, of London, in 1864, used the actual cautery—divided the pedicle with the actual cautery, and thus seared the stump of the pedicle. Spiegelberg, of Breslau, used the galvano-cautery in 1868. McCloud, of Glasgow, twisted off the pedicle by means of two pairs of strong forceps, and in that way controlled the hemorrhage. In 1869, Dr. Miner, of Buffalo, N. Y., enucleated the pedicle. In 1869, Peaslee, of New York, introduced a method which consisted in the introduction of a tube into the abdominal cavity, around which the pedicle was secured by double ligature. At the expiration of two or three days these ligatures were divided by a peculiarly shaped knife passed into the tube, and the ligatures, with the tube, were then withdrawn from the cavity.

These are in brief the different plans which have been adopted since 1809 in the treatment of the pedicle after ovariotomy in the intra-peritoneal method. All these forms can be divided into two classes: 1, those which include the application of ligatures to the pedicle; 2, those which dispense with ligatures. The first includes the method of McDowell, Nathan Smith, and of the other operators, in which the ligature is applied either to the vessels separately or to the pedicle in two or more portions or *en masse*. The methods which dispense with the ligature are torsion, the acupressure needle, the écraseur, the cautery in both forms, and the method of Dr. Miner, of Buffalo, *i. e.*, enucleation. It will be seen from this that the first method adopted was the intra-peritoneal.

I wish to mention another intra-peritoneal method, termed the sub-peritoneal method, in which the pedicle is constricted beneath the layer of peritoneum. It was suggested by Dr. Hayes, of Dublin, and consists in entering the needle beneath the peritoneum, carrying it around the pedicle, and bringing it out at the point of entrance.

The intra-peritoneal method was practised until Mr. Hutchinson, of London, introduced the clamp. Then the pedicle was treated outside of the abdominal cavity, being brought between the lips of the abdominal wound and clamped. There are some modifications of this method, but not many. They consist in securing the pedicle between the lips of the wound by acupressure needles, hare-lip pins, or some other method.

Spiegelberg and Waldeyer were the first to investigate the changes which take place in the pedicle after its ligation and return to the abdominal cavity. These experiments were made in 1868, and they were corroborated by Masllowsky, of Russia; he, going further in his investigations, endeavored to show what changes occurred in the pedicle after the application of the actual cautery. So far as I know, no experiments which show the changes occurring in the pedicle after ovariotomy, have been made in this country. Therefore, as a matter of interest, I exhibit to the Fellows of the Association the results which we obtained.

We propose to continue this series of experiments on the lower animals, and hope to present further results at the next meeting of the Association.

We selected rabbits as the animals upon which the experiments were to be made, and used ligatures of various kinds.

In the first experiment, we removed both ovaries. On one side we used a simple catgut ligature of the ordinary size employed for the ligation of vessels after operations. On the other side we used a chromatized catgut ligature, *i. e.*, a ligature which had been submitted to the action of chromic acid (one part of acid to five of water) for three weeks. This mode of preparation has been instituted for the purpose of hardening the ligature so that it will last longer; the fear being that the ordinary catgut ligature would so soon disintegrate that hemorrhage might thus occur after its application. This ligature was prepared in St. Mary's Hospital, as are all of the antiseptic dressings which are there used. It was of large size, and had been prepared for the purpose of uniting the fragments of bone in an ununited fracture, in which case it was proposed to apply the ligature and allow it to remain *in situ*. At the end of two weeks the rabbit was killed, and a post-mortem examination was made. On opening the abdominal cavity, there were no evidences of inflammatory action in the general peritoneal cavity. It was found that the ligatures (both the simple catgut and the chromatized catgut ligature) were completely encapsuled.

These specimens will show distinctly the conditions which existed. I also exhibit a drawing of a microscopical section showing this to better advantage than it can be seen in the specimen. In applying the ligatures, very little force was used. Only sufficient force was used to control the hemorrhage. This is a point to which I wish to direct particular attention as an important point in the discussion of this subject. The ligature was cast around the pedicle *en masse* with sufficient force to control the hemorrhage, and the ovary was removed. In applying the ligature to the pedicle it was embedded in the tissues, and at the point of application the two portions of the pedicle came in contact and became adherent. A layer of lymph covered the ligature—even the knots were covered. The layer of lymph passed over the divided ends of the ligature. Thus a bridge was projected between the proximal and distal portions of the pedicle. What had occurred in the distal—in the free portion—the raw surface? We found that it was also covered with a layer of lymph, and on one side it had become adherent to the adjacent portion of the broad ligament. On the other side the stump was free and covered with a layer of lymph.

An interesting point in connection with this is to ascertain, especially on the side on which the stump was free, how the stump was nourished. I think there is no doubt that it was nourished in two ways. In the first place, by this bridge conducting nutrition from the proximal to the distal portion; and in the second place by interstitial nutrition, *i. e.*, by nutrition passing through the tissues beneath the ligature which was sufficient to nourish the distal portion. On the side where the stump had become adherent to the broad ligament, no doubt the distal portion formed vascular connections, and in this way was nourished.

The specimens taken from the first rabbit, which I herewith present, make it very evident that the ligature is encapsuled.

Here are the specimens removed from another rabbit, in which a silk ligature and an ordinary linen thread were used. These ligatures had been soaked in a solution of carbolic acid (one part of acid to twenty parts of water). This rabbit was killed at the end of four weeks. We found on examination of the specimens that the ligatures had not disappeared, although not completely intact. Between the meshes of the ligature cells had wandered and the ligature was in a process of disintegration. This was also seen to a certain extent, in the catgut ligature in the first experiment. This indicates the manner in which the ligature disappears—by disintegration and by the development of cells which get into the meshes; in which way absorption takes place.

In these specimens at the end of four weeks we have a layer of lymph not so voluminous, showing that there have been some absorption, shrinking, and development; and after a time we should find only a thin, fully developed layer of lymph covering the ligature and also the distal portion of the pedicle.

Mr. Spencer Wells has objected to the employment of the intra-peritoneal method of treating the pedicle. He feared that the distal portion of the pedicle would slough off and would be thrown into the abdominal cavity and thus increase inflammatory action, leading to a fatal termination. He has, however, been convinced to a certain extent by the experiments of Spiegelberg and Waldeyer, although he still adheres in great measure, I believe, to the extra-peritoneal method of treating the pedicle. He had in one of his cases a fatal termination after the employment of the intra-peritoneal method, in which he found that the distal portion had attached itself to a coil of intestine; this portion was found in a sloughing condition and lying in a pool of pus.

In the second rabbit we found that adhesions had taken place between two portions of the intestine; adhesions between the abdominal wall and the intestine. We are just as liable to have adhesions of the intestine to the abdominal wall in the line of the incision, as we are to have adhesion of the pedicle in the extra-peritoneal method. What might occur also if the pedicle became adherent to the intestine is this: The stump might attach itself between two coils of intestine, and, suppuration occurring, the pus would accumulate as in a pocket and escape possibly through the intestine.

The conclusions which we may deduce from one or two experiments may be of little value; still they may be taken for what they are worth. I think that they show that the intra-peritoneal method is in every way a safe method; that nature takes care of the ligature, and that it takes care of the stump of the pedicle; a point of importance to which I think that attention ought to be called, is in regard to the amount of force which is used in the constriction of the pedicle. It is desirable to simply control the passage of blood through the vessels. It is very desirable to permit the so-called interstitial circulation, nutrition being maintained beneath the constricting ligature through the connective-tissue interspaces.

Subjoined is the report of Dr. Morris Longstreth upon the appearances presented post mortem:

Rabbit No. 1.—Right ovarian pedicle tied with carbolized catgut; left side tied with chromatized-carbolized catgut—large sized.

Operation, April 10th. Autopsy, April 25th, two weeks after operation.

The animal was killed with chloroform, and the body immediately opened. The specimens removed for microscopic examination were placed in Müller's fluid.

At the autopsy, no evidence of inflammation of the peritoneum was found. All the organs of the body were healthy.

At the seat of the operation, the extremities of the uterine horns were found attached to the adipose tissue embedded in the lateral or broad ligaments, by which the uterine extremities, their fimbriated terminations, and the ovaries are held in place. This adipose tissue formed a cap over the free end of the pedicle made by the removal of the ovary. The adhesions were firm and well organized, but the adjacent parts showed no evidences of inflammatory changes or lymph.

The bloodvessels behind the seat of the ligature were enlarged and very full of blood, and in the new tissue, over and at the point of operation, were seen fine red lines resembling newly formed capillaries.

The ligatures on both sides were thoroughly covered by either the old or the newly formed tissues. The catgut was entirely concealed, except on the left side, where the heavier strands had been employed; here the ends of heavy, blackened strands could be seen and felt protruding from the crease or furrow behind the tip of the pedicle, formed by the circle of the knot. These projecting ends of catgut were, however, completely covered, although visible through the layer of semi-transparent lymph, and thus they presented a smooth surface to the surrounding peritoneal membrane in contact with them.

The process by which the ligatures were covered, as seen by the naked eye, and in the sections under the microscope, was as follows: The compression of the pedicle, at the moment of tying the ligatures, caused a deep sinking-in of the tissues at this line, and on cutting away the ovary and its attachments, the parts on both sides of the ligatures well up over its strands, nearly covering it, but not completely. The opposed surfaces of the peritoneum, thus brought in contact over the ligature, adhered, and their union was cemented by a thin layer of lymph. By this process, the parts *beyond* the point of ligation were placed, probably very rapidly, in organic or vital relations with the parts *behind* the ligature.

The free extremity of the pedicle and all portions beyond the pedicle, though deprived immediately of blood circulating in the normal channels, received a measure of nutrient material, sufficient to maintain its vitality. This material could find its way into the tip of the pedicle through connective-tissue interspaces in the part compressed by the ligature. This compression was sufficient to prevent the passage of blood in the vessels, and thus control the hemorrhage, but was not firm enough to stop the penetration of the nutrient fluid derived from the blood. The nutrition was maintained, and rapidly increased by the route of the peritoneal surface newly adherent over and around the ligature.

The almost immediate effect of the partial strangulation on the tip of the pedicle is that the tissues of this portion become infiltrated with small cell-elements, derived partly from the cells of the part, partly from an immigration of white blood-cells. This portion, hence, becomes filled with material capable of covering the free extremity with a granulation tissue or a plastic lymph. If this material is well nourished, its capacity for rapid organization is very great, and the newly capped raw extremity may heal almost immediately. In this rabbit, however, the free extremity coated with lymph came in contact with the adjacent peritoneum, and adhered to it; between these two surfaces the microscopic sections show that union has taken place.

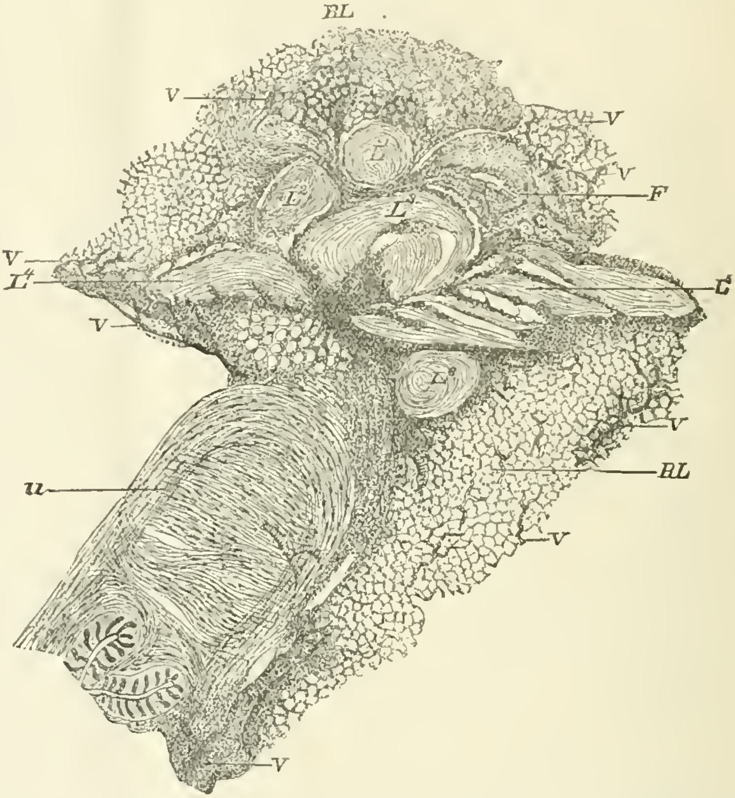
The ligature at the end of two weeks is well preserved, the knot well tied, and the whole firmly enclosed by a covering of organized or organizing materials. In portions there is presented the appearance of a vascular protrusion between the strand of the ligature. And if this foreign body is ever removed, the object is probably effected after the vessels have been well developed around and through its strands.

Rabbit No. 2.—Right ovarian pedicle tied with silk; left ovarian pedicle tied with linen ligature.

Operation, May 1st. Autopsy, May 29th, four weeks after operation.

The animal was treated in the same manner. The autopsy showed no form of disease, except several hydatid cysts attached to the omentum just below the transverse colon. The microscope showed the presence of living echinococci.

The uterus in this animal was probably nulliparous, and its tissue, as well as that of the surrounding parts, was less voluminous. No adhesions were found in the abdominal cavity around the seat of the operations.



U. Uterus. V. Vessels. F. Fallopian tube or uterine cornu. $L^{1, 2, 3, 4, 5, 6}$. Ligature. B L. Broad ligament.

The broad ligament arises from the uterus, and passes up between L^4, ^{5}, and ^{6}, and under L^3. The parts of it to the left (in contact with the uterus) are loaded with cells and inflammatory material. To the right is seen its fatty structure, somewhat inflamed, and containing small vessels, V. It has been caught also by L^6, adheres to L^4 and ^{5} by lymph, cells, etc. The upper portion of the broad ligament has been caught between L^1, ^{2}, and ^{3}. Its cut extremity has fallen over to the left, over L^1, ^{2}, and ^{4}, to which it is adherent by inflammatory material, just to the left of L^4. The upper and lower portions of the ligament here come into contact and adhere. At this point, the vessels V probably anastomose. The stump of the Fallopian tube, or uterine cornu, F has been caught between L^1 and L^3. Its cut portion has fallen down and to the right: the lower portion rests upon, and is adherent to L^5.

Some peritoneal adhesions of the intestines existed which were very possibly due to the introduction of the hypodermic needle in the administration of the solution of curare at the time the abdomen was opened. The points of the two pedicles presented about similar conditions.

The healing process had taken place without the intervention of adhesions to the surface of the broad ligament. The end of the pedicle was covered by a layer of organized material, and was much less in bulk than the same parts in the former animal. The ligature of silk with which the right ovarian pedicle was tied, remained in position.

STIGMATA OF MAIZE AS A DEMULCENT, ANÆSTHETIC DIURETIC.

By E. STUVER, B.Sc., M.D.,
RAWLINS, W. T.

For the last three or four years stigmata of maize has been used, especially by French physicians and surgeons, in irritated and catarrhal conditions of the bladder and kidneys, with most gratifying results.

Prof. Castan, at Montpelier, first called attention to the remedy and spoke highly of its beneficial effects in gravel and nephritic colic; in the latter disease its administration produced a marked amelioration of the painful symptoms, from which he inferred that the stigmata acted less as a diuretic than as a local anæsthetic. Prof. Denucé, of Bordeaux, obtained most favorable results in vesical catarrh, the remedy appearing to possess an elective action on the mucous membrane of the bladder. These statements are corroborated by a number of other eminent practitioners; of whom, Dr. Landrieux, from a considerable number of observations, has arrived at the following conclusions:

1. The various preparations of the stigmata of maize are of use in modifying the secretions of the urinary tracts. They may also be considered to possess a distinctly diuretic action. 2. Diuresis is rapidly produced, and the increase of urine is very marked after three or four days. 3. The diuretic effects are observed not only in diseases of the organs concerned in the urinary secretion, but also in the affections of the vascular system (diseases of the heart, bloodvessels, etc.). 4. The pulse is regular, the arterial tension is increased, while the venous pressure is diminished. 5. The remedy produces no disturbance of the nervous or digestive system. The tolerance of the drug is complete and absolute, while in chronic cases its administration may be continued for three to six months without inconvenience.

In *L'Union Médicale*, April 6, 1880, Dr. Dassum summarizes a number of reported cases of chronic cystitis, dysuria, and retention of urine of many years' duration, requiring catheterization, in which, after all the ordinary means, including washing out the bladder, had been tried and failed, stigmata of maize was used, and produced prompt and permanent relief.

In corroboration of the above-mentioned results, and in view of the fact that the merits of corn silk are not widely known, or, if known, are not fully appreciated by the profession, I submit brief reports of the following cases, taken from quite a large number treated during the last two years.

Case I.—February 9, 1883, was called to see Mrs. M.; married last autumn, and menstruated the last time on November 15, when she had some irritation of the bladder, with frequent micturition. This subsided in a short time, however, without treatment. About two weeks ago, she began to have pain in the lumbar region, pelvis, bowels, and bladder; micturition very frequent and painful, so much so, indeed, that her rest was broken at night, and she became very nervous and depressed. Pain is more severe when up and around than when remaining quiet. Gave fluid extract of stigmata of maize, one teaspoonful three times daily. Relief was experienced after the first dose, and in a couple of days the trouble had disappeared, and has not returned.

Case II.—April 13, 1883, was asked to prescribe for Mrs. B.; pregnant about seven months; first child. For some time she has been troubled with very frequent and painful micturition and pain in the bladder, which caused her a great deal of suffering. Gave fluid extract of stigmata of maize, teaspoonful three times daily, which soon relieved the frequency of and pain attending micturition, and enabled her to sleep well at night, which previously she was unable to do. The remedy had to be continued regularly until her delivery (June 6, 1883), however, as the painful symptoms invariably returned if a few doses were omitted. It never had any unpleasant effect, and promptly relieved the painful symptoms. After the birth of the child, the symptoms subsided without any medication.

Case III.—June 30, 1883, Mrs. L., strong, healthy, woman; married last January; menstruation has always been quite irregular; has not menstruated for seven weeks; never had any bladder trouble before the present attack. About ten days ago noticed some pain in the bladder, with frequent micturition, but only small quantities of urine were voided, and this on three or four occasions contained blood. The symptoms increased in intensity, and the frequent attempts to empty the bladder were attended and followed by a severe burning pain, which rendered her very miserable. Gave fluid extract of stigmata of maize, forty-five minims, every two to four hours. On July 2d, she called and stated that the bladder trouble had almost entirely disappeared, and she was feeling first rate.

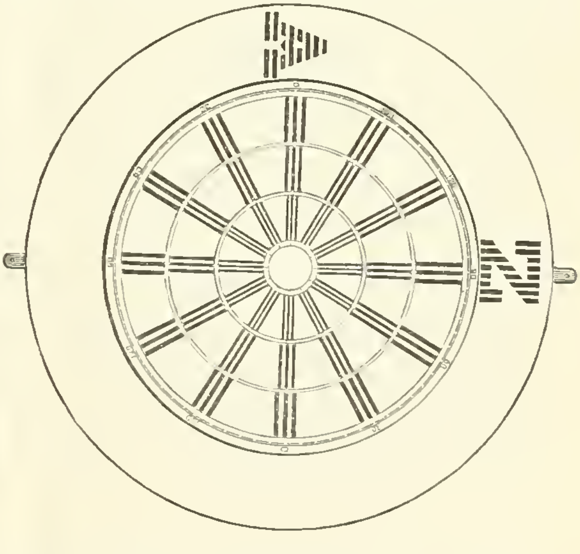
Case IV.—June 14, 1883, P. N., æt. twenty-five years, painter, consulted me with regard to bladder trouble, and gave the following history: Yesterday was engaged all day in painting the inside of an engine-boiler, and, as a consequence, was exposed to the fumes of lead and turpentine without adequate ventilation. In the evening felt badly, but retired as usual, and, being exhausted, slept very soundly until about two o'clock (A. M.), when he was awakened by a severe pain in the bladder, and an imperative desire to urinate; the act, however, was followed by a very small quantity of bloody urine. After this, micturition occurred every few minutes, was very painful, and only a few drops of bloody urine voided at each act. Saw him at seven o'clock A.M., and found him very restless, nervous, and suffering severely. Temperature somewhat elevated, and pulse slightly accelerated.

Gave fluid extract of stigmata of maize, teaspoonful every two or three hours. On the evening of July 1st he reported that he had suffered all day yesterday, but in the evening the pain subsided, and he got a good night's rest; after this the recovery was rapid and uninterrupted.

DESCRIPTION OF A REVOLVING ASTIGMATIC DISK.

By CHARLES A. OLIVER, M.D.,
ONE OF THE OPHTHALMIC AND AURAL SURGEONS TO ST. MARY'S HOSPITAL, PHILADELPHIA.

THIS instrument consists of three distinct parts: A flat brass rod, thirteen millimetres wide and fifty centimetres long, perforated at each end by a small hole. The rod is immovably fastened at its centre to a circular disk thirty-three centimetres in diameter, bearing on its face three concentric series of short test-lines, similar to those of Becker, each being representatives of a certain distance, width, and angle. Upon the periphery of this card are numbers representing five degree differences of angle, commencing at 0° on the left-hand side of the horizontal meridian, running on the under half up to 180° at the right-hand side of the same meridian. This is repeated in the opposite direction upon the upper semicircle, thus making the angles correspond, similar to the ordinary test-glass frame. Between the front card and the re-



taining rod there is a rotating disk forty-seven centimetres in diameter, having two of Pray's letters placed at a quarter angle to each other (ninety degrees apart), each having a small arrow so fixed as to meet the number of degrees on the outer card, showing the exact angle reached.

The primary principles in this instrument are in no way new, and for them no originality is claimed, as this as well as all other forms and contrivances are mere modifications of Thomas Young's original optometer. The placing of two lines of equal width and blackness at right angles to each other, which, to be seen with equal distinctness, must be set at different distances in reference to each other, if there be any asymmetry in the dioptric system of the eye.

The disk is to be fastened to a wall by the retaining rod, in a good light coming over the head of the observer placed at six metres' distance, and at a height so arranged as to bring the centre of the card on a level with the patient's eye.

If we find him able to see the 6 D. type with the eye under examination, he is to have his attention confined to the lines of the inner circle. If the sight of the eye be defective, he is to look at the outer circles. By now making him closely watch, we ask him to designate the clearest, sharpest, and blackest radius; after this has been chosen, we wheel the striped letter Z to the angle named, or to a point between, and ask which letter is the darker and clearer. He will then answer that the Z appears the plainer; now wheel the A into the place occupied by Z, and if it becomes the darker and the clearer, he will have verified his assertion, and the angles of astigmatism be obtained.[1]

Its employment in the estimation of ametropia, whilst the eye is under the influence of a mydriatic, is also of much value. I have several times, without the use of any test-types whatever, made experimental determination, and found that the results were identical with those obtained during the use of the letters. Yet it is no more than fair to state, that it was done with subjects of more than average intelligence, as really, although forming a most delicate test, it is harder to appreciate and keep in mind the slight observable changes of difference in the distinctness of the lines.

As an adjuvant in the verification of a corrected case of ametropia, it is of incalculable advantage. I always endeavor, after the selection of the correcting lenses, to have the two letters appear equally black and distinct in their entire revolution of the primary card, and that every spoke in the inner wheel (or those of the concentric widths, if I cannot bring vision up to normal) shall be of the same clearness, by these means getting the amount and angle of astigmatism almost to a dead certainty.

These disks can be obtained from Mr. John L. Borsch, optician, No. 221 South Ninth Street, Philadelphia.

1507 LOCUST STREET, PHILADELPHIA.

REPORT OF A CASE OF DISLOCATION OF THE FEMUR UPON THE PUBES.

BY WESLEY C. STICK, M.D.,
OF GLENVILLE, YORK CO., PA.

IF Prof. Henry J. Bigelow has never met with pubic dislocation in the living subject, and Mr. Timothy Holmes with but one case, it seems to me such cases are sufficiently rare to make reports of them both interesting and profitable.

Mr. J. J., a strong, muscular man, aged twenty-three years, was working in a drift in an iron-ore mine picking ore, with his body bent forwards and standing on loose, muddy ground. While in this position earth and ore caved upon him, covering him up to his neck. After he was released he was able to stand only on his right leg, his left leg being exceedingly painful. He was removed on a spring wagon to his boarding place, a distance of nearly two miles, where I saw him two hours after the accident, lying in bed and suffering with intense pain in his left hip.

His left hip was considerably swollen, and painful to touch, and the corresponding limb was slightly flexed, abducted, rotated outwards, and advanced. The trochanter was sunk inwards, and a line drawn parallel to the femur would have pointed towards the umbilicus. I could not feel the head of the femur rotate, on account of the intense pain caused by touching the groin. I could flex the leg, rotate it outwards, and adduct it, but could not rotate inwards, nor adduct the limb.

I made an attempt to reduce, without an anæsthetic. The leg was brought to a right angle with the thigh, and the thigh flexed to more than a right angle with the body, the whole limb being still in the position of abduction and outward rotation. An attempt was now made at traction and rotation inwards, but the pain was so great that I was forced to desist.

I placed the patient on the floor, under ether. I could now feel the head of the femur rotate on the pubes. Standing between the patient's limbs I first took hold of the dislocated limb, which was very large and powerful; by placing the palm of my left hand under the knee and grasping the foot with my right hand, the limb was still further rotated outwards. Second, the limb was abducted, without any force, to nearly a right angle with the body, when a soft snap was produced, audible over the room, no doubt caused by the head of the femur slipping down from the pubes. Third, the leg was flexed to a right angle with the thigh, and the thigh flexed to a little more than a right angle with the body. Fourth, just as I began to adduct the thigh and rotate inwards, a soft snap took place and the limb fell upon the table, parallel with its fellow. I could now move the limb into any position with the same ease that I could the sound limb. The entire procedure did not consume one minute. A pillow was placed between the knees, the legs loosely tied together, and the patient removed to bed.

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[1] If the patient's sight is so bad that he cannot make out any of the lines at six metres' distance, he must gradually approach the test, and watch for the first angle brought out. We note the distance and angle, and place the letter Z at the chosen meridian. He is then to walk nearer and nearer until the letter A and the lines at its meridian become as distinct as the letter Z and its lines. We accurately register this new distance, and calculate the difference.

In about one week the patient could walk across the room and move his limb into any desirable position, but the effect of the contusion of the soft parts had not entirely disappeared. The patient left for his home in New Jersey, and I have not heard from him since.

MEDICAL PROGRESS.

THE ACTION OF IRON AND ARSENIC IN ANÆMIA.—In a recent paper on "Some Points in the Pathology of Anæmia and on the Action of Iron and Arsenic," DR. FREDERICK WILLCOCKS, after giving minute details of seven observed cases in which systematic examination of the blood-corpuscles was made, concludes with some very instructive remarks on the subject.

Large and Small Doses of Iron in Chlorosis.—A careful consideration of the facts suggests the inference that large doses of iron usually act in chlorosis by simultaneously increasing both the number and relative color of the corpuscles, the latter being always in excess; while small, or possibly less easily absorbed doses act chiefly by increasing the number, the relative hæmoglobin value remaining constant, or even undergoing diminution at first. If the number of the corpuscles has fallen but slightly below normal, the hæmoglobin increase may alone be noted. The ultimate effect, however, of *all* iron treatment in chlorosis is to increase the hæmoglobin value out of all proportion to the numerical, and this increase continues long after the corpuscles have regained their average numerical standard. These points fully bear out the well-known clinical fact of the great value of administering large doses of iron in all cases of chlorosis from the outset.

Mode of Action of Iron.—In chlorosis the majority of the red corpuscles are young and undeveloped, and never attain their full hæmoglobin value. There is no reason to suppose that there is any impairment of corpuscle formation in this affection, since in many cases their number is but slightly reduced, and even in cases in which the number is much diminished, probably the excessive vulnerability of the young new forms accounts for the diminution.

In the severest forms of anæmia—the so-called pernicious or essential—in which the normal power of globule regeneration appears to be at a standstill, or almost entirely abolished, iron has no influence in increasing the number of the corpuscles. For, since the natural addition of young forms is almost entirely suspended, iron cannot, on our present hypothesis, indirectly increase their number by improving their vitality and hæmoglobin value. Iron not only does no good, but is actually harmful by acting as an irritant to the stomach, and thus promoting and keeping up the incessant vomiting. The concentration of the coloring matter in a very few large corpuscles, which appears to be the most prominent feature in the severest forms of anæmia, is probably due to a natural process of compensation, by which the respiratory function can still be carried on, even though the corpuscles are reduced ten or twelve times below their normal number.

In chlorosis, however, the supply of young, feebly colored corpuscles is abundant, and the number of red disks per cubic millimetre may fall in many cases but slightly below normal. The average hæmoglobin richness per corpuscle is greatly reduced, and the curative effect of iron is very rapid. A low average hæmoglobin value per corpuscle is not, however, peculiar to chlorosis, but is present in the large majority of anæmic cases from all causes. It is in these cases that iron is indicated.

Arsenic was given in two cases of chlorosis, but it had no influence either in preventing relapse on the cessation of iron, or in improving the number or value of the red corpuscles. On the other hand, in the most intense forms of anæmia, with great diminution in the number of the corpuscles and a high relative hæmoglobin value, iron is practically useless, or even harmful, while arsenic may produce a considerable rise in the number of the corpuscles, as well as great improvement in the general symptoms.—*Practitioner*, August, 1883.

PREMATURE GENERAL PARALYSIS.—In an article on this subject, *à propos* of a remarkable case observed in a young man, nineteen years of age, DR. E. RÉGIS draws the following conclusions:

1. General paralysis is an essentially *climacteric* disease, that is to say, narrowly confined to the middle period of life, during which it habitually manifests itself.
2. The real, immediate cause of this affection appears to be a deviation of the normal anatomical process, which extends, at this time, into the minute cerebral structure; most frequently the general paralysis is attributable to no other material cause.
3. Besides this general paralysis which becomes developed in its own time, and which is the true general paralysis, there are other cases which occur unexpectedly, some before, others after the ordinary period, which may be said to range between the ages of twenty-five and sixty-five years. The first may be designated as *premature general paralysis*, the second as cases of *late general paralysis*.
4. Cases of premature general paralysis, or paralysis before the age of twenty-five years, are very rare, and only a few cases are recorded. Paralysis coming on before the age of twenty is still more rare, only one case being reported (beside the one recorded by Régis).
5. General premature paralysis, contrary to true general paralysis, has habitually a powerful etiological factor, such as heredity, syphilis, traumatism, saturnism, or general or local diathesis. These causes appear to determine in these cases an early predisposition, and to prematurely place the brain in those conditions in which it is found in mature life.
6. Premature general paralysis has, habitually, a slower progress and a longer duration; it is more frequently subject to remissions; and is susceptible of a more or less permanent cure, thus according with the possible curability of general paralyses developed under the influence of a material or specific cause.—*L'Encéphale*, No. 4, 1883.

TOXIC PROPERTIES OF HUMAN SALIVA.—From numerous experiments on animals, GAGLIO and DI MATTEI conclude that fresh human saliva has no toxic action in itself, but that it may and does acquire toxic properties when mixed with decomposing material, or kept long in the mouth.—*Lo Sperimentale*, August, 1883.

INOSURIA IN DIABETES.—M. LABOULBÈNE, from a number of observed cases, is inclined to believe that inosuria occurring in the course of diabetes mellitus is a favorable sign, and believes that it may be regarded as a symptom of recovery.—*Revue de Thérap.*, September 1, 1883.

TOTAL EXTIRPATION OF THE UTERUS THROUGH THE VAGINA.—DR. LUIGI GUALA performed this operation on September 6th on a woman, æt. about forty-six years, on account of carcinoma. On the fourth day the patient was doing well.

Case of Neuro-fibromatosis.—Dr. J. W. Barrett exhibited a patient to the Medical Society of Victoria on June 6th. The patient is a sailor, who has noticed tumors growing for the last two years in almost every part of his body. None of them is larger than a walnut, and they are painless except when injured. Of late he has had several epileptiform fits.

The tumors can now be felt on almost every nerve of his body that can be examined with the finger, and vary in size from that of a walnut to that of a pin's head. They number thousands, and cannot be counted accurately.

The nerves obviously affected are the median, ulnar, musculo-spiral, radial, posterior interosseous, internal cutaneous, intercostals, posterior spinals, spinal accessory, lumbar, saphenous, femoral cutaneous, external and internal popliteal, and musculo-cutaneous nerves, together with a few of the branches of the superficial cervical plexus.—*Australian Med. Journal*, June 15, 1883.

The Third Corpuscle of the Blood.—Dr. Richard Norris, in his concluding paper on the development and coagulation of the blood, gives the following as the reasons why the invisible, colorless disk must be regarded as a constant and normal constituent of the living blood: 1. It is present in the absence of every condition which has been speculatively put forward as capable of producing it, such as solution of hæmoglobin, pressure or compression, violence, contact of two glass surfaces, removal of serum, post-mortem change, mere shedding of blood, etc. 2. It is present in its usual numbers when the blood has been diluted (as for blood-counting) with a five per cent. solution of sulphate of soda, a liquid universally held to be the best known preservative of the blood. 3. It is present as usual when that special preservative of the red disks—viz., osmic acid—is used in proportions and strength the same and also greatly exceeding those held to be necessary. 4. It holds no relation to increase or diminution of hæmoglobin in the liquor sanguinis, and is present in its usual numbers when the surrounding liquid can be shown by the spectroscopic and photogenic tests to contain a mere fraction of the amount of hæmoglobin necessary to account for its presence on the hypothesis that it is a decolorized disk. 5. It is present, and is seen in a few seconds, when a method is employed which appears absolutely to prevent any exosmosis of hæmoglobin, even though the specimen be kept for eighteen or twenty hours (colloid method). 6. It is present when the blood is diluted with a solution made by adding five grains of sulphate of soda to 100 grains of a two per cent. solution of osmic acid, thus combining the preservative powers of the two substances in their recognized strengths. 7. It is present when the blood is diluted with a solution made by dissolving hæmoglobin in water to saturation, and then adding an amount of sulphate of soda sufficient to make it into a five per cent. solution. It is scarcely conceivable that the corpuscles could yield up their hæmoglobin in such a diluent. 8. The colorless disks possess the chemical and physical characteristics of lymph-corpuscles, and have scarcely anything in common with the stromata of red disks. 9. They are present in the contents of the blood-glands, and in the lymph-fluids, before these are poured into the blood, and therefore necessarily in the blood itself. 10. Their analogue in the ovipara can be detected by means of its nucleus in the living circulating blood.—*Lancet*, August 25, 1883.

Nephrectomy.—The second nephrectomy in Naples, and the sixth in Italy, was performed by Dr. D'Antona on June 10th for hydronephrosis. The field of operation was first washed over with a five per cent. solution of carbolic acid. The abdomen was then opened in the middle line by an incision 4.8 inches long. When the peritoneum was opened, the descending colon was found fixed, a little to the left, by two folds of the mesocolon, which covered the tumor in front and behind. The tumor was then exposed, and a trocar plunged in, a large quantity of thin, serous pus, mixed with a turbid, urinous liquid, flowing out. The tumor was found to consist of four sacs containing this liquid. The sacs were separated from their connections with the surrounding tissues, the ureter and renal vessels ligated, and the kidney removed. A large drainage-tube was inserted through an incision about one inch long in the lumbar region. The abdominal wound was then closed by eight deep and four superficial sutures. The operation lasted one hour. The temperature did not rise above 100.4° (on the first day). The discharge from the drainage-tube was never great, and consisted principally of a bloody fluid. Some sutures were removed on the seventh day, and the remainder on the ninth. The patient was discharged on July 1st, well. Microscopic examination of the fluid showed pus and mucous corpuscles almost entirely in a state of fatty degeneration; a few blood globules; groups of cholesterine crystals; no renal cylinders, and uric and oxalic acid crystals.—*Gaz. degli Ospitali*, September 5, 1883.

Jequirity.—Dr. A. A. Foucher, from a study of fifty-one cases in which jequirity was used, concludes that: 1. Jequirity inflammation has different degrees of intensity according to the state of the patient and the manner of using the drug. 2. The type of inflammation appears to be measured by three factors: abundant secretion of a liquid resembling muddy water; a grayish glazing of the conjunctiva, and palpebral œdema. 3. Jequirity inflammation has more of a croupous than a purulent character. 4. It tends to spontaneous cure when the applications are discontinued. 5. In the majority of cases it passes off in from fifteen to thirty days. 6. Corneal or other complications are only to be feared in the bad cases in which the drug is left in substance in the eye, or when the infusions are very concentrated and too frequently employed. 7. It does not appear to have any evident influence on the progress of corneal ulcers or abscesses. 8. Fresh solutions are preferable to old. 9. Cold infusions appear to be most active. 10. Powdered jequirity placed on the palpebral conjunctiva has a prompt and efficient action, provided it is not left in the eye after the lids are washed. 11. Jequirity cures true granulations, pannus, and papillary hypertrophy following chronic inflammations. 12. It is more efficacious in the non-inflammatory and chronic, than in the acute stages of these diseases. 13. The curative effect may be appreciable after a few days, but usually does not appear for a month or two. 14. It rapidly cures old and inveterate cases of trachoma and pannus. 15. It is easily used, and exempt from danger in prudent hands; and is rarely painful. 16. In some cases it is necessary to make several successive attempts to use it. 17. Cicatrices of the conjunctiva are very hard to deal with under its use. 18. It is not necessary to place the patient in a dark room during the treatment. 19. An eye which has already been subjected to jequirity ophthalmia, may be again attacked and more severely than the first time. 20. Inflammation should be produced at once; else the drug may be inefficient. 21. The acute stages of corneal and conjunctival inflammation may be benefited by its use. 22. The powder contained in macerations heated to boiling, lose their effect when subjected to a second maceration at a low degree of temperature. 23. Salicylic acid grs. ij to f℥j of water, does not appear to decrease the effect of jequirity. 24. The preparation most preferable, seems to be very fine powder applied to the conjunctiva, and then immediately removed; and cold macerations of grs. vij to f℥iv of water.—*L'Union Méd. du Canada*, No. 9, 1883.

Coca as an Antidote to Opium.—Dr. Pahuer recommends coca for persons habituated to the use of opium, citing a series of cases in which it gave decidedly good results. It is an excitant of the nervous system, and antagonizes the terrible depression which follows opium-eating. In some cases the habit was discontinued after a week's use of the coca; in others it was gradually abandoned.—*L'Indipendente*, July 5, 1883.

Value of determining the Primary Lesion in Joint Disease as an Indication for Treatment.—In a paper read at the late meeting of the British Medical Association, Mr. George Arthur Wright, in regard to treatment, asks the questions: Is erasion more or less dangerous than excision? Does it give as good or better results? And to what cases is it applicable? By erasion he means freely laying open a joint, exposing the whole articular surface to view, and dissecting out all diseased structures with the greatest care and thoroughness.

In answer to these questions, he says that in proper cases, erasion is less dangerous than excision, because it does not open up bone-tissue. It has two great advantages in its results: first, a movable joint may be obtained; and, secondly, there is no shortening, except such as may subsequently arise from less perfect nutrition of the limb, and this his cases show not to occur.

Lastly, it is applicable to the following cases: To the knee it may be applied in all cases of well-developed chronic synovitis (pulpy disease), which do not improve under treatment, and in which the disease has not gone on to suppuration or deep excoriation of bone. To the tarsus and carpus it may be applied in a few cases of localized disease; but neither there nor in the ankle is the prospect of success good. To the elbow, it could not be, he thinks, applicable, if a movable joint be expected, unless it is done very early and in special cases, but he has not tried it. To the hip it is never applicable, and probably never to the shoulder. It is never applicable where there is extensive bone disease; where there is suppuration, unless very limited, or a great amount of caseation; nor where there is advancing tuberculosis. To be successful, it must be very complete.

Thus, of the eleven cases of erasion of the knee, in two extensive suppuration had taken place, and in two tuberculosis existed. All of these failed. At the time when he began to erase, he had not much basis to go upon in deciding what cases were suitable, and he was obliged, therefore, to ascertain for himself. He does not think a case which has been erased is much the worse for it, should it come to excision afterwards; but he would urge strongly that the erasion must be most complete and thorough, not a mere scooping out, but such removal as will, if possible, leave simply a healthy incised wound, as it were, to heal rapidly, and allow early passive movement. Hence it is only possible, when the joint is actually opened, to decide whether it is a case for erasion, or whether excision is required. It is chiefly the difficulty of removing all the morbid tissue completely that renders the operation unsuccessful in the ankle, and probably in the elbow.

His conclusions, therefore, are these: In the case of the hip, excise very early. In the knee, if seen early, and general treatment with splints, and so on, does not speedily cause improvement, erase; if too late for that, excise. In the ankle, erasion and excision are alike unsatisfactory, and, if non-operative treatment fail, he advises amputation. Pirogoff's operation, if possible, gives the best results; though, for the tarsus, gouging, in many cases, is successful. In the elbow, failing treatment otherwise, he does not yet know about erasion, but he thinks excision is generally necessary to obtain a movable joint.—*British Medical Journal*, Sept. 1, 1883.

The Cholera Microbe.—Dr. Stephan Kartulis, physician to the Greek Hospital in Alexandria, reports the discovery of a microbe in the water of the canals and river. A drop of this water showed, under the microscope, a mass of micro-organisms which he had not been able to find in former researches (this examination was made on July 18th, after cholera had broken out in Alexandria). The water contained two or three kinds of algæ and desmidæ which moved vigorously in the water. Beside these, he found two or three kinds of monads, with vigorous motion, such as euglena, hæmatococcus, and monas guttata. The protoplasm of all these, including the algæ, was colored with chlorophyll. There were also infusions of different kinds. But the greater part of this water contained a great quantity of amœba, the colloid substance of which was filled with vibrios or zoöglæ which moved briskly. There was also seen a species of torula, one-fourth to one-half as large as a red blood-corpuscle.

But the smallest of these organisms could not be distinguished without coloring; they were, therefore, colored by Koch's method, partly with fuchsin and partly with gentian-violet, and swarms of sphæro- or oval cocco-bacteria were found colored an intense red; there were also found separate rods of the size probably of one-fourth the periphery of a red blood-corpuscle. Amongst these swarms of micro-organisms were many rows of bacteria with ramifications. Each of these bacteria had the length of the diameter of a red corpuscle, and was colored an intense red by fuchsin. Beside the bacteria, there were a few examples of a bacillus two or three times larger than a red corpuscle, and twice as thick as a tubercle-bacillus, of a slightly curved and wavy shape, and colored a beautiful red by fuchsin. These then were the organisms found in the Nile water.

The blood and stools of seven patients were examined. Swarms of micrococci and spores or bacteria were found in the first two cases, some of which were isolated. A species of torula was also found in a few cases. When colored, these bacteria appeared as very small rods. Examination of the blood of the remaining five showed many cocci, colored red by fuchsin and violet by gentian, while the red corpuscles were pale. The greater part of these cocci were round, while some were of a slightly elliptical form, and were about $\frac{1}{20}$ to $\frac{1}{15}$, some $\frac{1}{10}$, the diameter of a red corpuscle. Between these were seen single spores. In one case there were seen, in the field, five or six round bodies $\frac{1}{20}$ or $\frac{1}{15}$ as large as a red corpuscle, with movement to the right and left. Noteworthy also was the abnormal fibrine formation under the microscope, which took a form resembling that of a urine cylinder. In a third case, seven hours before death, examination of the blood showed micrococci with similar movements to those above described. In a colored preparation hundreds of micrococci were seen, many in masses, others in groups of four to six, others again dispersed singly.

There was no doubt of the nature of the disease in these cases as shown by the clinical symptoms and *post-mortem* examination.—*Berlin. klin. Wochensch.*, September 3, 1883.

Antagonistic Action of Atropine and Pilocarpine.—M. Morat has recently studied the mechanism of the antagonism of atropine and pilocarpine on the movements of the heart. It is already known that atropine accelerates the heart-beats and that pilocarpine retards them, and also that atropine renders inexcitable the moderating elements of the pneumogastric. M. Morat has established the fact that pilocarpine paralyzes and renders inexcitable the excito-motor elements of the cervico-thoracic sympathetic.

It seems rational, then, to conclude that atropine and pilocarpine are specific poisons, the one as regards the vagus, the other acting on the sympathetic (cardiac filaments), and that this specific action makes the two substances antagonistic. This was shown by the following experiment: The cardiac accelerator nerves were excited in an atropinized animal; the frequency of the beats was not increased. It may be argued that this frequency being already at a maximum, a new irritation causes no increase. But the parallel experiment of irritating the vagus of a pilocarpinized animal shows that the number of beats is not diminished. In other words, atropine and pilocarpine act simultaneously on the two orders of cardiac nerves, and in the same manner, in diminishing their excitability. The difference of their action shows that these two orders of nerves are unequally paralyzed, sometimes in the interest of one, sometimes of the other. The two nerves are acted upon in inverse order, and unequally, by equal doses. The antagonism resides, then, not in the substances themselves, but in the nervous elements upon which they act.—*Revue de Thérap.*, September 1st, 1883.

Gummata of the Penis.—M. Ozenne, in an article on this subject in which the details of nine cases are given, concludes that gummous syphilides may develop at the expense of different parts of the organ, and occupy four situations: the mucous membrane of the glans and the prepuce, the sheath of the penis, the urethral canal, and the corpora cavernosa. When arising from the mucous membrane, they are ordinarily situated at the level of the corona in the glando-preputial groove. Whatever may be their origin, these gummata present, when situated on the penis, the same evolution as when arising in other portions of the body; when recent, a solid tumor, when old, ulceration exists. At the beginning there is found a small nodule, very hard, forming a slight projection, rounded or hemispherical, sometimes flattened and circumscribed. Completely indolent, this callus of the penis, as it is sometimes called, presents no inflammatory character. In some cases it does not commence by a nodule; it extends widely over the surface, infiltrating the tissues to a variable depth, and then constitutes an induration in the skin (*en nappe*). It has been known to invade the entire organ and form a sort of cuirass.

When no attention is paid to the affection, the second or ulcerative period appears. The ulceration is limited and generally not deep, but sometimes burrows to such an extent as to merit the name of gummatous cavern. The edges are perpendicular, its floor uneven and contains a suppurating spot, a very adherent eschar. It is surrounded by a red and indurated zone, contrasting with the softness of the sound parts. Under specific treatment, complete cure often results; but in certain cases, it is only obtained at the price of a cicatricial deformity. A gumma situated at the meatus may produce urethral atresia; and when situated at the frenum may cause perforations and urethral fistulæ.

Subcutaneous gummata of the sheath are not particularly noteworthy; sometimes they leave an adherent cicatrix which may incovenience coitus and incurvate the penis at the time of erection. Urethral gummata are not frequent; sometimes they invade the canal by the extension of ulceration developed primarily in the neighboring tissue; and again, but more rarely, they arise primarily in the urethra. The second form is revealed by a yellow purulent discharge, of blenorrhagic appearance, and an induration of the canal, forming a sort of pipe with hard and thickened walls. According to Veale, a certain number of strictures have this origin and are not amenable to ordinary mechanical treatment.

Gummata of the corpora cavernosa are but little known, and their histological characteristics ignored. Circumscribed, disseminated in various numbers in the two corpora, or, more often, in one only, they develop—as all tertiary lesions—in an indolent manner, and are situated toward the posterior third, on the dorsal surface or lateral parts of the organ. By their situation and numbers, they cause functional troubles more marked than when they attack other parts of the penis; at the time of erection, which is partial and asymmetric, they give it a more or less irregular form, and produce various incurvations.

As to their treatment, though local medication has caused them to disappear, it is always preferable to use general specific treatment. Cure may be complete, or cicatrices, causing more or less deformity, may persist indefinitely.—*Revue de Chirurgie*, No. 7, 1883.

The Heredity of Insanity.—Dr. E. Marandon de Montyel, of Dijon, in a paper on this subject, in which forty families are reported and followed up for several generations, draws the following conclusions:

1. Families with the hereditary taint of insanity are distinguished by (*a*) sterility of far more than ordinary frequency; (*b*) exaggerated fecundity in case of fertile unions; and (*c*) excessive mortality of early infancy, twenty-six per cent. instead of twenty per cent.

2. The concurrence of these three peculiarities in one family authorizes, to a great extent, the diagnosis of hereditary insanity.

3. The influence of hereditary insanity on the fecundity of married persons and the mortality of the children varies in the same family in different generations.

4. The primary influence of hereditary insanity is to increase the fecundity: this decreases more and more in succeeding generations.

5. By the excessive infant mortality and increasing sterility, these families tend to become extinct.

6. The foregoing conclusions are confirmed by the fact that, if the marriages of early generations produce a considerable number of children, succeeding marriages produce children more and more feeble, which will ultimately end in sterility.

7. It is probable that the mortality of early infancy increases with generations, and that their vitality diminishes with their number.

8. Paternal and maternal hereditary insanity, considered in themselves, confirm the general laws laid down above.

9. Paternal hereditary insanity is more powerful than maternal in influencing fecundity and sterility of married persons, as well as in the influence upon the mortality of early infancy.

10. The preponderating influence of the mother on the development of insanity in the descendants, demonstrated by Baillarger, is only diminished by the preponderating influence of the father on the mortality of early infancy, and does not exist in a larger proportion than ten per cent.

11. From this it may be concluded that paternal hereditary insanity is especially influential in the early years of life, and that of the mother later.—*L'Encéphale*, No. 4, 1883.

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EPILEPTIFORM CONVULSIONS OF CORTICAL ORIGIN.

The first experimental studies of the functions having their seat in the cerebral cortex appeared to have no practical application. After a time, Dr. Hughlings-Jackson came to the conclusion, from pathological evidence, that the cerebral cortex was concerned in certain voluntary movements, and that some epileptiform attacks were induced by irritation of these "motor areas" or "centres."

At the outset, we must define "epileptiform," although by so doing we may embarrass our learned readers with merely elementary observations. Not to embrace other topics, it will suffice to say that convulsions of the type epileptic may be a substantive disorder—true or essential epilepsy—or they may be a merely symptomatic condition—epileptiform. In the latter case, the convulsions merely signify the existence of some "coarse lesion"—a tumor, for example. G. Fritsch and E. Hitzig ("Ueber die elektrische Erregbarkeit des Grosshirns," Reichert u. DuBois-Reymond's *Archiv*, 1870) demonstrated the electric excitability of the cortex, before denied, and proved the existence of motor centres, irritation of which by the electric current induced movements in the associated muscular groups. Simultaneously, Ferrier engaged in the same course of investigation, with the view to test the accuracy of Dr. Hughlings-Jackson's opinion. It is a most interesting fact that the experimental research confirmed the theory based on pathological observation. Ferrier demonstrated that localized epileptiform convulsions occurred in muscles in connection with the motor centre excited, and that the general convulsions began in these muscles, and thence extended to the whole body. It proved to be a question of the degree of the local irritation: slight excitation caused localized muscular spasms; strong irritation, general convulsions. We owe to Luciani the demonstration of the important fact that the epileptiform seizures produced by cortical irritation are transmitted by heredity. Brown-Séquard has since demonstrated similar facts in the case of epileptic seizures in Guinea pigs, induced by nerve injuries.

Not all animals are affected in this way by cortical irritation. Localized epileptiform attacks are readily enough induced in the dog and cat. Dogs even vary in their impressionability, and Albertoni thinks some are wholly unexcitable. François-Franck and A. Pitres ("Recherches Expérimentales et Critiques sur les Convulsions Epileptiformes D'Origine Cortiçale," *Archives de Physiologie Normale et Pathologique*) hold that the same degree and kind of stimulation applied to the brain of different dogs do not always develop the same degree of reaction, but none are entirely wanting in the power of response to irritation of the cortex. Young, fully-grown, and vivacious dogs of good stock are better subjects for the production of epileptiform attacks than are common, old, low-bred, and stupid animals. Cats are good subjects for these experiments.

The kind of irritation employed to incite convulsions is electrical—galvanic or faradic; but mechanical or chemical excitation may produce the same effect, although much less promptly and certainly. Thus, given a wound of the cerebrum of a dog, the epileptiform seizures are not likely to occur at once, but at a variable period after cicatrization of the wound, and then without any appreciable immediate excitation.

At what point must the irritation of the cerebral cortex be applied to develop partial epileptiform attacks? It is perfectly well known that when the cerebral convolutions are irritated in certain animals, convulsions follow; but is there a limited epileptogenic zone, as there is a well-defined motor zone? It seems to be definitely established now that, in the dog, at least, excitation of any part of the motor area may produce epileptiform attacks. MM. François-Franck and A. Pitres believe that convulsions may be caused by electric irritation of almost any point on the exterior surface of the brain, and have, indeed, developed them by very intense and prolonged faradic stimulation of the sphenoidal and occipital convolutions, which are placed considerably without the extreme limits of the motor zone. They explain this result by the *diffusion* of the current, and hold that it is only excitation of the motor zone which really produces epileptiform seizures. Here a very weak current and consequently feeble irritation will cause a prompt explosion of an epileptiform character; but in other situations, only currents sufficiently intense to insure diffusion through the cerebral mass will produce this effect.

When the cortex of the epileptogenic zone is removed, it is found that excitation of the subcortical white substance produces simple movements of the muscles on the opposite side in anatomical connection therewith, but never convulsions. That the experimental observations on which this statement is based may not be vitiated, it is necessary to remove or destroy every part of the cortex. It is the failure to appreciate this essential condition that caused the fallacy in the negative observations of MM. Bubnoff and Heidenhain ("Ueber Erregungs- und Hemmungs-Vorgange innerhalb der motorischen Hirncentrum," *Pflüger's Archiv*, Band xxvi.). These physiologists caused convulsions by irritating the white matter of the *centrum ovale*, because, as asserted by Franck and Pitres, they had not entirely removed the associated cortex.

Galvanic or faradic stimulation of the highest intensity, acting on the corpus striatum, and optic thalamus causes neither muscular movements nor convulsions. When, however, even weak excitation is applied to the internal capsule, muscular contractions of a tetanic character occur, chiefly on the opposite side of the body, and somewhat on the same side, but they cease promptly on the removal of the irritation, and do not have the convulsive character.

Various conditions affect the excitability of the cerebral cortex, and are, therefore, concerned in the production of epileptiform seizures from irritation of the epileptogenic zone. The excitability of the brain may be increased or lessened by the influences to be considered presently. First, as to the conditions under which the excitability is lessened: the brain of a new-born animal is unexcitable, and continues so for from fifteen to twenty days after birth. The anæsthetics—ether and chloroform by inhalation, and chloral by intravenous injection—when carried to the point of complete insensibility, abolish absolutely the excitability of the brain. Bromide of potassium possesses the same property if its administration is carried to a sufficient extent. Albertoni has, indeed, made use of this method, as our readers are informed, for demonstrating the nature of the therapeutical property possessed by the bromides. Secondly, the excitability of the brain may be increased. Of all the causes acting thus, the most powerful is congestion of the cortex, especially inflammatory afflux of blood. Indeed, it appears from some experiments of MM. François-Franck and A. Pitres that simple congestion, such as may be caused by section of the cervical sympathetic, does not affect the excitability of the cortex, but a slight degree of inflammatory congestion renders it, in a high degree, responsive to irritation. Certain medicines have the power to increase the excitability of the brain, notably strychnine, atropine, and, probably, picrotoxine, cinchonidine, and some others. The result of the action of these influences is to promote the readiness of response of the cortex to various forms of irritation. We have thus an immediate and striking illustration of the value of these researches in promoting our knowledge of morbid states, and of the effect of remedies on them.

THE TREATMENT OF VESICAL CATARRH.

No one who has had much experience in the treatment of catarrh of the bladder can have failed to realize the difficulties in the way of its cure, and the extreme annoyance on finding, at the daily visit, that the patient is still unrelieved.

Heretofore, our armamenta have consisted in the use of the numerous infusions, of which those of uva ursi, triticum repens, buchu, and pareira brava are typical examples, and of which none appear to be of any value except as diluents; of the numerous alkaline mineral waters, which are sometimes useful for the same reason, and sometimes harmful because they render the urine more alkaline when it should be acid; of balsam of copaiba, which is more frequently beneficial, but which not more than one stomach out of ten can bear beyond a few doses; of sandal-wood oil, which is nearly, but perhaps not quite, as efficient as copaiba, but is much better borne by the stomach; and finally, of the exclusive skim-milk diet, which we have known to answer when all else has failed, although by no means always successful. Then there are the topical applications, of which warm water carefully injected into the bladder is about as useful as any, although injections of weak solutions of nitrate of silver and of bichloride of mercury, of the mineral acids, and of carbolic acid are recommended. All of these measures have been used in every sort of case, without any constancy of result, although any one of them may, at times, have been found useful.

Among these resources, we should not omit to mention drainage of the bladder through the forcible dilatation of the urethra in females, and through a perineal opening in males, which have been of service in not a few cases.

This being the unsatisfactory state of our therapeutics of this troublesome malady, any suggestion which promises to be efficient will, of course, be gladly received. Two measures, of comparatively recent suggestion, seem to demand further trial. These are the internal and topical use of chlorate of potassium, and the internal exhibition of salicylate of sodium.

The administration by the mouth of the former remedy was recommended by Edlefsen several years ago (*Deut. Archiv f. klin. Med.*, Bd. xix., Dec. 1876), and its use in three per cent. solution as an injection into the bladder, more recently (*Deut. med. Woch.*, Jan. 1882) by Boegehold. Still more recently this same surgeon (*Ibid.*, Aug. 29, 1883) has brought forward salicylate of sodium as a specific in certain forms of acute and subacute vesical catarrhs. Salicylic acid was suggested by Fürbringer as long ago as 1875 (*Berl. klin. Woch.*, No. 19), for a catarrhal state of the urinary tracts attended with ammoniacal urine, and by Maas, in König's *Text-book of Surgery*, on account of its antiseptic and antifermentative properties. Boegehold tried it at that time with inefficient results, which he now ascribes partly to insufficient doses, and partly to the fact that it was not used in cases to which it was adapted.

In no disease is it more important that treatment should be based upon a correct appreciation of the cause than vesical catarrh. At least three distinct forms may be recognized, 1st, that due to cold; 2d, that resulting from extension of a gonorrhœal inflammation; and 3d, that caused by decomposing urine due to obstruction, and the introduction of decomposition bacteria whether through unclean catheters or otherwise. The latter can only be relieved by measures which will cleanse and disinfect the bladder as well as remove the obstruction. Such are solutions of salicylic acid, carbolic acid, and corrosive sublimate, together with the cure of stricture and of enlarged prostate by catheterization and parenchymatous injection with iodine.

On the other hand, in catarrh of the bladder from cold or by extension of a gonorrhœa, which affect usually only superficial layers of the organ, the two remedies referred to, the chlorate of potassium and salicylate of sodium may be used with every expectation of success. Of the former a five per cent. solution may be ordered, and a tablespoonful given every two hours, as originally suggested by Edlefsen. To this may be added, if necessary, but not until after the acute stage is passed, injections into the bladder of a three per cent. solution of the same remedy.

Of salicylate of sodium, half a gramme, or seven and a half grains, may be given in solution or in a wafer every two hours, for from three to four days, when the acute symptoms will generally be found to have abated; after which the same dose may be continued for eight days longer. Should the extraordinary advantages claimed by Boegehold for this remedy be sustained by experience, we shall have a powerful adjunct to our means of treating cystitis. Because he says of it that, for certainty, promptness, and convenience, it is equalled by no other.

DIGITAL DIVULSION OF THE ORIFICES OF THE STOMACH.

On the 9th of July, 1883, Prof. Loreta, of Bologna, divided the cardiac orifice of a girl of twenty years of age who had suffered from stenosis for four years, and who, although of average height, was reduced by slow starvation to a weight of seventy-five pounds. Various therapeutic measures had been tried in vain upon the case, and it was decided to forcibly open the stenosed orifice, in the hope that a result such as had been attained in operations on the pylorus might be obtained. The operative process was different in this case from that of the original, performed by Prof. Loreta in a case of pyloric stenosis, as the location and direction of the abdominal and gastric wounds were quite different. The operation was followed by no unfavorable symptoms, in the form of fever, peritoneal inflammation, or vomiting. The abdominal wound healed by the first intention, and in seven days the woman was in a fair way to recover.

The fifth digital divulsion of the pylorus, and the fourth done by Prof. Loreta, was performed on July 15, 1883, the subject being also a woman, the disease of the stomach having existed for three years. She had vomiting attacks daily, and was very much reduced by the gradual starvation. The operation occupied but twenty minutes, there being no adhesions, and no difficulties other than those naturally belonging to the method. As in the other case, there were no febrile or inflammatory sequelæ. On the eighth day, when the dressing was removed, the abdominal wound was found united by the first intention. In ten days the immediate cure was secured, there having been no vomiting or other disturbance of the stomach since the section was made.

Time alone can test the result of the four cures effected by this method of forcible dilatation, and determine whether, and to what extent there exists a danger of a return of the stenotic condition. Thus far we have heard nothing unfavorable of the cases operated upon, and it is possible that they may be permanently benefited. Forcible dilatations in other parts of the human body are so liable to be followed by contraction that we shall hold the operation of Loreta in doubt until we have positive evidence that its cures are permanent. The demand for the operation in Italy shows that malnutrition must prevail to a large extent, and that ulcerative states of the stomach ending in stenosis are not at all uncommon. Such a condition is very rare in the United States, as we have a generally well-fed peasantry, with no pellagra or malacosteon. Possibly there may be a demand for this operation even here, but the cases must be of very infrequent occurrence.

CONTAGIOUS DISEASES OF ANIMALS.

The action of the German Government as to American pork and the frequent discussions in the French Chamber and the English Parliament of questions relating to American meat, both alive and dead, make it incumbent upon this Government, in the interests of trade, not only to guard against contagious diseases of animals, but to have some system of inspection for meats and for live stock sent abroad. While there is much that is sensational in the reports as to epidemics of contagious pleuro-pneumonia, its occurrence is too frequent.

A few cases of it have recently occurred in Salem, Connecticut, but not, as was reported, derived from New Jersey. Long Island and Staten Island are not rid of the disease. In New Jersey there are at present no known cases. Several herds were affected in the vicinity of Newark early in February last. Inoculation was commenced in accord with the modifications and improvements of methods advised by Wilhelms, Rutherford, Williams, and Fleming. In these cases, the inflammation confines itself to muscles and connective tissue, and does not attack the lung. But the most interesting asserted fact is that the inoculated animal will not communicate the disease. It is a comparative study of great interest to the epidemiologist. These inoculations have been under the charge of the New Jersey State Board of Health.

Some valuable inquiries into this and other kinds of communicable diseases of animals are being conducted by the Agricultural Department at Washington under the care of Dr. Salmon.

COLLECTIVE INVESTIGATION OF DISEASE.

Apropos of the editorial in our issue of Sept. 22d, on "The Collective Investigation of Diseases," we would state that at its last annual meeting held at Norristown, in May of this year, the Medical Society of the State of Pennsylvania passed a resolution providing for a committee of three members on each of the following branches: Medicine, Surgery, Diseases of Women and Children, Ophthalmology and Otology, Nervous Diseases, Insanity and Idiocy. It is the duty of the committee to prepare a series of questions calculated to obtain the history, symptoms, and treatment of the different forms of disease. When these questions are prepared, they are to be sent to the members, with the request that they fill out, in full, one case of the disease specified in the list of questions, and return the same to the chairman of the committee on that branch; so that by this means a collective investigation of the different forms of disease may be made, and a more thorough account obtained of all the facts bearing on the disease in its different stages. When these answers have been received, the different committees shall arrange the facts thus procured for presentation to the Society.

The resolution was offered by Dr. Curwen, and, we presume, it was suggested by the invitation of the Committee of the British Medical Association. Since, however, the State Society of Pennsylvania appears to be the only one which has taken any action, and as there will be no opportunity for others to take similar action for nearly a year, we reiterate our suggestion that the chairman of the American Medical Association Committee select at once from the members of the Association a number of physicians in each State, who can make a beginning; using, at first, the sets of questions prepared by the English Committee. In the case of Pennsylvania, the existing committees might be reappointed and enlarged, if necessary.

THE PRESENT STATUS OF THE CODE CONTROVERSY.

The Code controversy in New York has now reached the stage in which argument has ceased, and the strength of the respective parties is being carefully computed prior to the appeal to the ballot in the New York County Society—the birthplace and stronghold of the New Code—on the 29th proximo, and in the State Society next February.

A poll of the 1661 physicians whose names are in the New York City Medical Register shows that 764 adhere to the National Code, 404 are advocates of the New Code, and 54 of no code. The remainder are uncommitted. In the New York County Society, we are reliably informed, the advocates of the National Code are largely in the majority.

The canvass of the State, which is still in progress, shows that there are 2405 physicians who adhere to the National Code, 924 to the New Code, and that there are 215 who advocate having no code.

These figures are extremely gratifying. They show that the profession of the State has been completely misrepresented in the State Society at its last two meetings, and they unerringly point to the speedy revocation of the New Code.

The City of Newark has recently constructed an open sewer over the Newark meadows, for a large ward of the city. It has a very imperfect fall, but by an open canal alongside, which catches the incoming tide, it seeks a flush which shall carry out the sewage to the bay. We shall see whether salt water will not precipitate a part of the sewerage, and, after a time, the open sewer fill and become a nuisance.

SPECIAL ARTICLE.

DOES VIVISECTION PAY?

Two chief objections are urged against vivisection—its cruelty and its uselessness.

That American experimentalists (and we only have to do with them) avoid all possible pain by the use of anæsthetics is positive truth; and it is done equally in the interest of science, to avoid pain as a disturbing factor in their problem, and on the score of humanity. But, to say the least, the charge of cruelty comes with ill grace from those who cage ill-fated birds for the pleasure of their song; who cause the sacrifice of thousands of birds and fur-bearing animals for mere ornament in dress; who "boil alive" lobsters and terrapin for the pleasure of the palate; who "torture" fish by the hook, and look with equanimity upon their painful gasps and convulsive struggles to escape from suffocation; who maim birds and inoffensive beasts in the pleasure of sport; who, without anæsthetics, torture and mutilate cattle, horses, sheep, swine, and poultry to make them a little less annoying while alive, or a little more tender when dead; who ruthlessly wound and kill wolves, wildcats, and snakes to promote the safety of man, and who poison, or otherwise "torture," by dog or cat or trap, with more than the persistence of science, rats, mice, and all sorts of vermin, solely to promote man's comfort, and yet object to a comparatively few scientific experiments for the promotion of his comfort, and beyond that to prevent his sickness, to cure his maladies, to prolong or even to save his life.

Vivisectors do *not* delight in cruelty. Their sole aim is the increase of knowledge, and of knowledge that will be useful to man and animals. That students do all sorts of cruel experiments merely for amusement, or to obtain dexterity in operating, is neither probable nor true. It is not probable, for vivisection requires a deal of time and large outlay for instruments and animals, and students have neither a surplus of time nor of money; and, as a matter of *fact*, students rarely ever perform any vivisections at all. The atrocious misrepresentations by the anti-vivisectionists (not to use a shorter and more vigorous word) are simply amazing in women and men otherwise honest and truthful.

But the second is the more important point; for if it can be shown that vivisection gives us knowledge which could not be otherwise obtained, and which is of immense good to man and beast, and, on the whole, lessens suffering and saves life, it must be granted by any one whose reason is not warped by sentiment that it should be promoted instead of being abolished.

That Harvey discovered the circulation of the blood and Sir Charles Bell the functions of the two nerve-roots by vivisection has been denied by the anti-vivisectionists; but any one who will read their works, and see their experiments on living animals *described in detail*, and then deny the fact that they did such experiments, must be adjudged incapable either of understanding facts correctly, or of reporting them truthfully. And upon the two facts they demonstrated hang well-nigh "all the law and the prophets."

Again, the medical uses of electricity, the modern methods of artificial respiration in resuscitating the nearly drowned, the present operation of transfusion, and our knowledge of the sounds of the heart, and therefore of valvular diseases, have all been developed by older experiments on animals and recent researches founded upon them.

But it is more the modern progress by research that we wish to draw attention to. John Hunter's famous experiment of tying the artery which fed the antlers of the stag, the growth of which he was studying, led to his operation for aneurism—an operation that saves hundreds of human lives every year. But its brilliant results have been quite equalled and its beneficence increased by modern researches upon the action of the ligature, and upon various materials for ligature. Animal ligatures, which are non-septic, and which are cut off short and absorbed, are as great an advance in the treatment of hemorrhage and of aneurism as was Hunter's operation. At the opening of this century, ninety per cent. of the cases of aneurism died, and ten per cent. were cured. At present, ninety per cent are cured, and ten per cent. die.

Along with this vast improvement have come others, which are no less striking and beneficent. Physick and McClellan and Mott and Mütter would stand amazed at a modern operation, "painless, bloodless, feverless, and almost [and in many cases entirely] without suppuration," as compared with those forty years ago. The last two gains are due directly to vivisection. Founded partly on previous acquisitions, but chiefly on his own vivisections Lister showed us how to operate in such a way as to obtain union by first intention without fever or suppuration, and has consequently enabled us to do operations, which twenty years ago were Utopian, both in their desirability and their impossibility. And this means *human life saved and human happiness increased*. While anæsthetics and Esmarch's bandage are not wholly due to vivisection, their use is largely the direct result of knowledge so derived. Indeed, vivisection will before long, we suspect, reveal to us the ideal anæsthetic that will enable us to abolish pain, retain the consciousness, and therefore the coöperation, of the patient, and this too with safety. Even now, Bert is showing us by vivisection how to give anæsthetics with less danger than heretofore.

Our exact knowledge of Nature's methods of repair in fractures, and of the *rôle* of the periosteum in diseases of bone, is directly due to experiments on animals, and our practice has improved amazingly as a result—a direct gain to every patient with a broken or a diseased bone.

In medicine as well as surgery only a few of the advances due to vivisection can be named. The classical experiments of Virchow, by which he showed the effects of small solid fragments—emboli—broken off from blood-clots, or from diseased valves of the heart, have thrown more light on these processes of disease than the post-mortems of a century. The experiments of Bernard on the origin of diabetes have changed midnight darkness to morning dawn, and some time the noon will come and with it the cure of the disease. The same may be said of the researches of Klebs and Tommasi-Crudeli on malaria, of Wood and Formad on diphtheria, and many others like them.

Nearly all our modern knowledge of the processes even of inflammation, are due to vivisections by Cohnheim, Stricker, Norris, Klebs, and their co-workers. Intelligent and accurate acquaintance with the processes of disease is the first step in the correction of errors of past treatment and in establishing a wiser course in the future.

In the cruel experiments by disease on man, which the anti-vivisectionists insist shall be the only ones we shall use, wide-spread agony and frightful slaughter of human beings by thousands replace the far less painful sacrifice of a few of the lower animals. Thiersch experimented on 56 mice by inoculating them with cholera discharges. Of the 56, 44 sickened, and 14 died with choleraic disorders. So much for the vivisectionist. Two water companies in London experimented on 500,000 human beings by inoculating them with cholera discharges by impure water during two epidemics. By one epidemic alone, and by one company alone, 3476 human beings were killed, of whom over 2000 would have escaped had the lesson of Thiersch's 14 mice been heeded. So much for the antivivisectionists. Which was the most cruel? Which the most useful? Yet, while Thiersch, were he a Pennsylvanian, might, with impunity, poison his 14 mice with arsenic to abate a nuisance, it is soberly and seriously proposed that he should be prohibited from poisoning them by cholera discharges, in order to abate, and if possible abolish, a dreadful pestilence!

Nor is this the only pestilence to be abated. Cholera has slain its thousands, but consumption its tens of thousands. Familiarity deadens our horror of ordinary diseases, but it does not change the mortality returns. A more intelligent hygiene, thanks to Villemin and other vivisectionists, now saves many a life; and though with doubts, as if we can scarce believe it to be true, we do seem to be possibly on the eve of the discovery of the causes of consumption and many of the zymotic diseases. Nay, more; the time may not be far off when we shall be able to eradicate or neutralize their poisons. The whole study of the effects of microscopic organisms is but in its infancy. Their effects can only be studied by means of experiments upon animals. To prevent them means to postpone life-saving discoveries for many years. Twenty thousand persons die annually of snake-bite in India alone. If, by preventing experiments with snake-poisons on animals, we postpone the discovery of an antidote for five years, at a cost of untold suffering, and of one hundred thousand human lives, instead of one-hundredth that number of dogs, have we done wisely? Nay, have we not acted cruelly?

The whole natural history of the trichina in pork, its danger to man, and the modes of making it harmless even if eaten, is due to vivisection. Yet all such beneficent progress the Anti-vivisection Society will *stop*. They mildly propose at present only to "regulate;" they mean—we know what we allege—they mean to *suppress all vivisection*.

Thanks to vivisection, we are beginning to understand the localization of function and of disease in the brain and spinal cord, and this has given us an accuracy of diagnosis and of treatment heretofore impossible.

As to the use of various remedies, almost the whole of our accurate scientific knowledge of their actions are due to vivisection. We may experiment with them, it is true, on man, but we suspect that the president of the Anti-vivisection Society himself would probably dismiss his doctor if he did. Asking for his cur or cat, the doctor would, of course, be denied. What then must the doctor do? Give his remedies with the best light he has. And pray what is this but an unsatisfactory experiment, as unwise as it is unscientific? Besides new drugs, such as carbolic acid, physostigma, chloral, pilocarpine, pepsin, pancreatin, nitrite of amyl, and others added to our stores by experiment, there is scarcely a drug of importance that has not been investigated experimentally, its actions demonstrated both in moderate and in dangerous doses, its alkaloid, if any, made useful, and its proper applications to disease determined with a scientific accuracy (which means again the saving of human life and the lessening of human suffering) utterly unknown thirty years ago. Such experiments *cannot* be made on man.

In disease the experiment is so complex that we cannot say with precision what the effects of the remedy are. In healthy animals we can. And we can vary the conditions under which the drug is used so exactly as to eliminate possible errors. We can also give doses dangerous to life; discover the reasons for the dangers and so learn to avoid or to neutralize them in man. The rational treatment of disease to-day owes more than one-half to vivisection.

The argument that drugs do not act alike on man and animals has been used by many. But while it is true in a few exceptional cases, any one familiar with the facts would smile at the ignorance or prejudice of any who to-day seriously advance such an argument. If evolution has given animals "equal rights" with man, as Mr. Tait maintains, among them is the right to be poisoned by the same drugs and cured by the same remedies as his master.

In not a few medico-legal cases, as has been well shown by Gamgee, the physiological tests—*i. e.*, experiment on the lower animals—are among our most accurate methods of detecting criminals; yet all this, it is proposed, shall be given up and the poisoner go free.

And finally the lower animals themselves are benefited by vivisection to a degree unappreciated, save by a few. A general must sometimes utterly sacrifice one corps of his army to win a battle. The few lives lost there save the whole army. Pasteur has slain not a few animals in his researches on splenic fever and chicken cholera. What now are the results? Last year it is stated that 80,000 sheep were "vaccinated" in one department (Eure et Loire), and only 0.65 per cent. died of splenic fever as against an average for the last ten years of 9.01 per cent. or nearly sixteen times as many; of 2308 vaccinated sheep 8 died, or one in 288, while of 1659 not vaccinated 83 died, or one in 20. If the anti-vivisectionists have their way, the dumb brutes may well pray to be delivered from their friends.

Moreover, another question arises. There are not in all the United States over a dozen of professed vivisectionists who for any large part of the year give up their time to this work. Nor are there in this State over a dozen who work at it even irregularly. Is it worth while to organize a great society, hold public meetings, flood every city with documents, and spend money largely to suppress these few? Suppose their work *is* of doubtful value, should man or the animals have the benefit of the doubt?

REVIEWS.

Index-Catalogue of the Library of the Surgeon-General's Office, United States Army. Authors and Subjects. Vol. IV. E–Fizes. 4to. pp. 12, 1033. Washington: Government Printing Office, 1883.

The fourth volume of the *Index-Catalogue* has just been published, and includes the letters E to Fizes, covering 1033 pages, and 4802 authorities, 12,361 book-titles, and 49,977 journal articles. A cursory inspection of the volume shows that the same painstaking care and intelligent supervision in its preparation have been exercised by Surgeon Billings as in that of its predecessors.

The extent of the references may be shown by a few examples selected at random. We find 36 double-column pages given to the bibliography of the ear, 109 to the eye, 28 to the femur, 11 to empyema, 328 to fevers, 38 to fistula, etc.

The publication of this work reflects the highest credit on the intelligent liberality of our Government, and we trust that nothing will occur to interrupt its speedy progress to completion.

Observations on Lithotomy, Lithotrity, and the Early Detection of Stone in the Bladder, with a Description of a New Method of Tapping the Bladder. By Reginald Harrison, F.R.C.S., etc. 8vo. pp. 71. Illustrated. London: J. & A. Churchill, 1883.

This rather long title precedes a short book containing an agreeable and instructive account of some of the author's experiences and conclusions in regard to the general subject of stone. Those who are familiar with Mr. Harrison's writings need not be told that he has a pleasant way of putting his opinions, nor that these opinions are well worthy of attention. The book now under consideration is not likely to prove especially valuable to the student; but the surgeon can gather from it just such ideas as he would look for from another surgeon with whom he might be conversing. Everywhere one finds in it hints which are not to be looked for in text-books, but which make pleasant and profitable reading to one who has no longer need to be instructed in the rudiments of lithotomy and lithotrity.

The part of this book which refers to tapping the bladder contains an account of a case where Mr. Harrison relieved the tension of a bladder obstructed by prostatic hypertrophy, by passing a trocar and canula into the former through the perineum and prostate, and leaving the canula in as a permanent drain. The effect was not simply immediate relief, but eventually closure of the wound, recovery of the power of retention and voluntary urination, together with an almost total disappearance of the functional and physical evidences of enlarged prostate. This procedure he now recommends for general adoption. In this he fortifies himself with the endorsement of Prof. S. D. Gross, to whom his book is dedicated. American surgeons have contributed very materially to Mr. Harrison's opinions, as is evident from the frequency with which he quotes them, and the manifest respect and regard he feels for them. It would appear that it was not without its effect that he has had the opportunity to meet so many representative American surgeons in their own country. Certain it is, that in some way Mr. Harrison has acquired a manner of writing which makes the critic feel most kindly toward him, and which adds a charm to the excellent matter of his literary work.

SOCIETY PROCEEDINGS.

THE TRI-STATE MEDICAL SOCIETY.

Ninth Annual Meeting, held at Indianapolis, September 18, 19, and 20, 1883.

(Specially reported for The Medical News.)

The Tri-State Medical Society held its ninth annual meeting in English's Hall, Indianapolis, Indiana, on September 18, 19, and 20, 1883.

Tuesday, September 18th, First Day.

The meeting was called to order by Dr. J. Livingston, of Indianapolis, at eleven o'clock A.M. After prayer, Dr. Thompson introduced **Dr. Wm. Porter**, of St. Louis, Mo., **The President** of the Society, who at once assumed the Chair.

Governor Porter, of Indiana, was then introduced, and delivered an

ADDRESS OF WELCOME,

as follows:

Gentlemen: It has been said by some wise man that one man with a will outnumbers fifty without, and in that respect, at least, *this* assembly is large and animating.

The salutations of our morning papers have so cordially welcomed you that further words are hardly needed to strengthen the assurance; nevertheless, as an official representative of the State, I desire to extend to you a most cordial greeting. You have your national, your State, your county, and your neighborhood associations, but this is not one of them. This may properly be called your kinship convention. The inhabitants of Illinois, Kentucky, and Indiana are allied by blood, similar habits, and largely by identical conditions affecting health and disease.

I do not think any of the professions are more progressive than yours. An opposite opinion prevails among some who misinterpret many of your rules, honestly designed, whatever their effect may be, to separate quackery and charlatanism from true medical progress. No profession is more hospitable to new suggestions and aids—none subjects them to fairer and juster tests to prove their value.

After referring to the enlargement of the domain of medical science, and the application of the principles of preventive medicine, he said:

Why should you not be welcomed here by a State?

The progress and glory of a State depend upon the mental and physical vigor of its citizens. Health invigorates, disease enfeebles. Whoever, in a large way, can prevent disease, or remove hereditary taints, or show how great cures can be wrought, performs a high service to the State, for which it may well feel grateful. The great physician, in his own calling, may perform the service of a patriot, not less than the warrior and the statesman.

Dr. J. L. Thompson then welcomed the Association with some pleasing remarks, and presented the report of the Committee on Programmes and Arrangements, which was accepted.

The Secretary, Dr. G. W. Burton, of Indiana, then read his report, including the minutes of the last meeting, and the work done during the year, mentioning the growth of the Society and its library; alluding to the death of Dr. J. W. T. Gerrish, of Indiana, one of the early members of the Society. Letters were read from Drs. S. D. Gross, Austin Flint, and others, regretting their inability to be present at the meeting. Dr. Gross called attention to the resolution he introduced at the Cleveland meeting of the American Medical Association in reference to the training of nurses in the smaller cities.

A paper, detailing a case of

TORTICOLLIS,

by Dr. D. S. Booth, of Sparta, Illinois, was read by Dr. Byrd. The case was congenital, in a boy aged twelve, and caused an extreme deformity, but was entirely relieved by the division of several muscles by the tenotome.

Dr. Ap Morgan Vance, of Louisville, then read a paper on

THE TREATMENT OF COMPOUND FRACTURES,

noting the opposite opinions upon the subject held by different authorities, one saying treat all cases as open wounds; another, close them all; a third says, supplement the first by drainage. It is the practice of Dr. Vance to dress compound fractures as simple, using the plaster-of-Paris dressing entirely, and trusting to the thermometer to tell if the case was going through as simple or compound. He used no antiseptic, but placed absorbent cotton around the wound. Some hemorrhage always occurs under traction, which purges the wound, and it heals under the scab cotton and blood. Fever of 101½° to 102½°, that cannot be otherwise accounted for, calls for investigation, but there ought to be no haste in opening the dressing, particularly if the elevation occurs within forty-eight hours. In such cases he gives a mercurial, followed by quinine; if it occur suddenly, from the third to the sixth day, he opens the wound and gives good drainage to the pus. In hot weather the use of ice bags increases the chance of success.

Afternoon Session.

A paper was read by Dr. H. J. B. Wright, of Olney, Ill., on

NERVE-STRETCHING,

which he has found to be of value in sciatica; five out of eight cases being cured, two dying of cancer. Dr. Wright operated upon a laborer, æt. 48, who had been treated intelligently in the usual manner for a long time; the nerve was stretched, inflammation occurred, pus formed, and the case was cured.

Dr. Byrd, of Quincy, reported a case resulting in a cure.

Dr. R. Haughton, of Ind., discussed the pathology of the operation, holding that the molecular condition of the nerve trunk was interfered with.

Dr. Wright stated that though the operation was empirical, so long as it was safe and successful the profession was justified in resorting to it. It had no effect upon a case of anæsthesia of fourteen years' standing, this being the only case of failure.

A paper on the *Pathology and Treatment of Pneumonia*, by Dr. J. C. Bundy, of Ill., was then presented, and in the absence of the author, was read by Dr. Byrd.

Dr. W. S. Haymond, of Indianapolis, then read a paper on

A CASE OF FRACTURE OF THE OS FRONTIS OF EIGHTEEN YEARS' STANDING.

The two tables were united. The bone was almost ulcerated through. The decayed parts were removed and the patient was entirely relieved.

Some discussion followed this paper, which gradually turned upon the question of trephining for epilepsy, in the most of which cases it was thought to be productive of good.

Dr. J. E. Link, of Terre Haute, read a paper upon the use of

THE ROLLER BANDAGE AS A DRESSING FOR STUMPS

after amputation, and as a means of preventing erysipelas and abscess. He used layers of sheeting, wrapped about the stump, leaving it open for drainage. Of his two hundred cases of amputations, he said, not a patient had died from the operation, nor suffered from after-pains. He used no antiseptics, and no formation of pus took place. This paper, and some cases introduced to show the bandaging, excited considerable interest.

Evening Session.

The President, Dr. Wm. Porter, of St. Louis, delivered his address. One of the chief results of a regular attendance upon the sessions of any medical association, he said, is an extension of personal acquaintance.

It has been said that its success is inimical to the interests of the different State societies and the American Medical Association. This is in no sense true. The aim is to refer all complaints back to such societies. There is probably no large society in the land the members of which more uniformly respect and indorse the principles of the national association. The President congratulated the members of the Society that there had been no "ethical" wrangle among them, and that the guiding lines laid down by Percival eighty years ago are honored by the Society to-day.

The President suggested that the interests of the organization are now so important that no one of them can be neglected. It is impossible, owing to the extent of territory and rapid increase in membership, to have full knowledge of the whole work. The success of the Society depends upon individual effort. Men should be chosen in each congressional district, or in each local Society, who would use their personal influence for the advancement of the Society. The question of extension of territory must soon be considered. Originally including the three States, in a few years Cincinnati and St. Louis were added, which, with Chicago, Louisville, and other cities; gave the Association a large following. Delegates from beyond these confines are now sent, and men from other States ask to join the Society. What better structure, the President suggestively asked, could be built upon the solid foundation of the Tri-State Medical Society than the stately walls of a Western Medical Association; added territory and coming years bringing the certainty of added work at the sessions? In another year it will be necessary to extend the time to four days, or to divide into sections during some of the sessions. The latter should only be considered when it becomes unavoidable.

Dr. A. W. Brayton, of Indianapolis, reported a case of

MYELITIS DUE TO ARSENICAL POISONING,

interesting from the person having taken an ounce of arsenic, yet recovering without antidotal treatment. Paralysis followed, and mental impairment. The question was debated whether lead and arsenic cause paralysis of the extremities by affecting the spinal cord or the peripheral nerves.

Dr. H. M. Post here read a paper on *Syphititic Interstitial Keratitis*, which was well received.

Dr. R. E. Haughton, of Indiana, read a paper on

THE RELATIVE MERITS OF RESECTION AND AMPUTATION,

in which he discussed the subject at length. He argued that amputation is much the safer and better. The mortality, he said, even under the best methods of disinfection, is not likely to be less than after amputation, and as the mortality is now shown to be seven times more in amputation, when considering all varieties of resections, it must be regarded as a question of grave consideration to the surgeon, and especially to his patient, when about to be submitted to an ordeal which is so much the more dangerous than amputation is now known to be. In giving his conclusions, Dr. Haughton said that (1) no excision should be made in aged persons; (2) no excision should be made in very young persons; (3) no excision should be made if there is even a suspicion, much less evidence of the existence of phthisis or other constitutional diseases; (4) no excision should be made in acute disease or injury; (5) excision may be made in cases where the hand or foot and limb are to be saved, and which are of more than common value to the patient; hence the elbow- and knee-joints may be excised under proper considerations; (6) the shoulder- and hip joints may be excised when amputation would cause greater mutilation and a greater loss than incision, and the patient has equally good chances for recovery after excision as after amputation, which is rarely possible; (7) excisions are not to be made in cases of malignant disease of the articular ends of bones or other parts of bones; (8) excisions should not be made for acute abscess in the knee-joint, and most likely not in any case of acute abscess; (9) excisions of joints generally are seven times more fatal than amputations under the same circumstances and in the same class of cases; (10) no surgeon is justified in subjecting his patient to excision, in view of all the facts made known, unless there are good and substantial reasons for assuming the greater risks by seven times over for his patient; and the extraneous circumstances which must overbalance in favor of an excision against it is a moral and surgical responsibility that is anything but conservative.

Dr. Byrd exhibited *Hutchinson's Modification of Swift's Inhaler*, which he uses in administering the following anæsthetic, which he prefers:

Ethyle bromide, ...	1 ounce.
Chloroform, ...	2 ounces.
Alcohol, ...	4 "

Wednesday, September 19th, Second Day.

Morning Session.

Dr. N. Field, of Indiana, read a paper on the *Physiology of the Brain in Relation to Insanity*, which, after some discussion, was followed by a paper on *Insanity*, by Dr. P. S. Hayes, of Chicago, and one by Dr. C. G. Comegys, of Cincinnati, upon *Some Mental Problems in Questions of Medical Jurisprudence*. These three papers were referred to the Committee on Publication, with the request that they be published.

Dr. N. P. Goddy, of Indiana, then followed with a paper on *Heredity*, which elicited some discussion.

Dr. Chenoweth then read a paper giving the particulars of a case of *Peritonitis*, supposed to have been due to an induced abortion, which resulted in death. The uterus and its appendages were exhibited to the Society, eliciting much interest, and Dr. W. H. Wathen, of Louisville, Ky., was appointed to examine the same and report.

Afternoon Session.

Dr. Wathen, from the pathological indications furnished by the uterus exhibited by Dr. Chenoweth, decided that:

1. No pregnancy existed.
2. That no abortion had been attempted.
3. That there was one opening penetrating the uterus, and a second one going through the parenchyma only.
4. That the so-called corpus luteum was a cyst.
5. That the size of the uterus is normal.
6. That dysmenorrhœa might have induced sufficient trouble to cause death.

The business for the hour being the report of the Committee appointed to

REPORT UPON THE SUGGESTIONS CONTAINED IN THE PRESIDENT'S ADDRESS,

Dr. Porter, in the absence of any of the Vice-Presidents, called Dr. T. B. Harvey, of Indiana, to the Chair.

Dr. Byrd, of Quincy, Ill., Chairman of the Committee, recommended that the Society be known as "The Medical Society of the Mississippi Valley," which was adopted. This scope includes the territory between the Rocky and Allegheny Mountains, and from Canada to the Gulf.

A recommendation to reduce the registration fee to $2 was lost.

Dr. Rauch moved that all offices be filled by a committee consisting of one member elected by each State represented; this was seconded and carried.

It was also ordered that all local Societies be considered affiliated bodies, and entitled to representation.

A paper was then read by Dr. E. Bock, of St. Louis, on *Sponge-grafting*, which elicited much interest.

Dr. Wathen, of Louisville, read a paper on *Vesico-vaginal Fistula*.

Dr. A. B. Thrasher, of Cincinnati, read a paper on *Naso-pharyngeal Catarrh*.

Dr. H. H. Mudd, of St. Louis, gave a paper on *Stone in the Bladder*.

Dr. Louis D. Brosse, of Evansville, read a paper on *Tuberculosis*, as produced by the inhalation of sprayed sputum—illustrated by fifteen cases.

Dr. L. E. Stocing, of Ill., reported a paper on the *Relation of the Condition of the Digestive Organs to Insanity*.

Dr. H. N. Clark, of Ill., presented a paper on *Amputation—Hot-water Applications*.

Dr. W. H. Wathen, of Louisville, Ky., exhibited a new *Sutural Needle for Use in Vesico-vaginal Fistulæ*, or similar operations, that presented some unusual points of interest.

Evening Session.

Dr. Charlton, of Seymour, Indiana, read a *Memorial of J. W. T. Gerrish*, of the same place, who was one of the first members of the Society, and who always took a prominent part in its proceedings.

The Committee on Nominations then reported the following persons as

OFFICERS FOR THE ENSUING YEAR:

President.—Dr. B. M. Griffith, of Springfield, Ill.

Vice-Presidents.—Dr. J. M. Matthew, of Louisville, Ky.; Dr. C. G. Comegys, of Cincinnati, Ohio; Dr. J. E. Link, of Terre Haute, Ind.

Secretary.—Dr. G. W. Burton, of Mitchell, Ind.

Treasurer.—Dr. F. M. Beard, of Vincennes, Ind.

Chairman of Committee of Arrangements.—Dr. F. L. Matthews, of Springfield, Ill.

Place of Next Meeting, Springfield, Ill.

Dr. G. C. Smythe, of Greencastle, Ind., then read a paper on the *Antipyretic Treatment of Typhoid Fever*, giving the details of a large number of cases so treated; the treatment resulting unusually successful. Several members discussed this mode of treatment, giving an almost unqualified voice in its favor.

Dr. D. S. Reynolds then read his paper, making some remarks on *Opacities of the Cornea*, noting that he had met with considerable success in relieving that condition, except when interstitial, by the operation of tattooing.

Dr. J. M. Matthew, of Louisville, presented a paper on the use of the *Ligature in Rectal Surgery*.

Dr. G. J. Cook, of Indianapolis, gave a paper on *Diseases of the Upper Part of the Rectum*.

Thursday, September 20th, Third Day.

Morning Session.

The session was opened by the reading of papers on *Tait's Operation*, by Dr. T. B. Harvey, of Indianapolis, and Dr. W. A. Byrd, of Quincy, Ill., after which a paper on a case of *Prolapsus of the Left Ovary; Battey's Operation; Death*, was read by Dr. J. Iutzie, of Richmond, Indiana.

Dr. J. F. Hibberd, of Richmond, Ind., then presented a paper on *What is the Proper Management of a Child during the First Seventy Hours of Post-uterine Existence*, taking the ground that the dosing of infants with various substances and the strapping with tight bandages were wrong, and favoring as little interference as possible with nature. The opinions of the Society were in accord with the views of Dr. Hibberd.

Afternoon Session.

The afternoon session was held in the amusement hall of the Insane Asylum, by invitation of Dr. Fletcher, some seventy members being present.

Dr. G. V. Woolen, of Indianapolis, read a paper on the *Use of Chloroform in Parturition*, advocating the view that in many cases it was desirable to carry the patient to full anæsthesia. Considerable discussion followed this paper, many members preferring the use of ether to chloroform.

Dr. H. C. Fairbrother, of East St. Louis, Ill., read a paper upon *Phlebitis*.

Dr. W. H. Myers, of Fort Wayne, read a paper on *Tracheotomy*, holding that in cases of obstruction of the trachea, it is the duty of the surgeon to at once open it, and remove the foreign body.

The Society then visited the wards of the Asylum, and found them clean, well ordered, and containing 621 male and 477 female patients.

Evening Session.

Dr. S. J. Jones, of Chicago, read a paper on the *Influence of Errors of Refraction and Defects of Accommodation of the Eye*, showing the danger of the indiscriminate selection of improper spectacles.

The President, Dr. W. Porter, of St. Louis, then introduced the President-elect, Dr. B. M. Griffith, of Springfield, Ill., who assured the Society of a hearty welcome and ample accommodations at Springfield, in September, 1884, at which time and place the next meeting of the Society is to be held.

The Society then adjourned.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting September 19, 1883.

The President, Wm. M. Welch, M.D., in the Chair.

Dr. Wm. R. D. Blackwood reported

AN INTERESTING CASE OF FEMORAL HERNIA IN AN AGED PATIENT; STRANGULATION; OPERATION, WITH CURE.

Mr. B., aged seventy-three, was taken ill with supposed cholera morbus on August 11, 1883, but from the suppression of alvine dejections shortly after the seizure, and the rapid change of the vomited matter to a stercoraceous fluid by the time his family physician—Dr. John Ivison—saw him, the diagnosis of the family was set aside for one of more grave nature. The gastric distress was very great, the desire to vomit urgent, and the act occurred at short intervals.

The case was believed to be one of obstruction, with possible invagination of the bowel, and efforts were made toward overcoming the difficulty and obtaining an operation in a normal direction, but without success. The question of strangulation by hernia was not at first accepted, because, although there existed an evident swelling at Poupart's ligament, the size of it was so small as to be taken for an enlarged gland, the patient having had glandular enlargement previously. There was no local *pain*, no *tenderness*, no *tension*, no *dragging* sensation at the site of the swelling, no tympanites—in short, the usual local signs of strangulated hernia were absent. The little tumor was also movable to such an extent as to easily deceive one, even when closely examined. Dr. Blackwood saw the case in consultation; as the patient was rapidly sinking from exhaustion, it was decided to make an exploratory incision and determine the nature of the enlargement. After cutting down to the sac the mass was found to be an entero-epiplocele. The sac contained very little serum, and considering the fact that strangulation had doubtless existed for at least thirty-six hours, the bowel, though highly congested, was in good condition. The gut was tightly nipped at the crural ring and was nearly empty, which accounted for the small size of the tumor. The hernia was internal to the femoral vessels, but closely adherent to them. It was reduced with some difficulty and pushed far up to clear the deep thrust of the needle in closing the wound. The stitches, four in number, were deeply taken and the ring obliterated as nearly as possible. He reacted well, and in an hour and a half passed an alvine dejection without pain or difficulty. In a week the old gentleman was able to walk his room with comfort.

The diagnosis of femoral hernia is, at times, not easy, being, as here, liable to be confounded with enlarged glands, or localized varix of the saphena. There was no impulse on coughing, no effort at reduction affected it, and, excepting only the very small tumor, all the local signs of strangulated gut were absent. The advanced age of the patient was against him, and his depressed vital power was a bad factor. The result shows the value of exploratory operation under the circumstances, and Dr. Blackwood believes that the attendant is unfaithful to his patient if he does not insist upon it in every suspicious case. The wound is of little account—it does not enhance the danger which is already imminent, and it may, as here, save a valuable life.

Dr. Benjamin Lee presented a specimen of

VERMIFORM MUCOUS DISCHARGE FROM THE RECTUM,

the interest of which lies in the close resemblance it bears to a tape-worm, and it was sent to him under the impression that it was a portion of a tape-worm partly dissolved by medicine.

Dr. Chas. M. Seltzer exhibited a

SPECIMEN OF ANEURISM OF THE ASCENDING POSTERIOR PART OF THE AORTA.

The patient from whom it was obtained was aged 35, and was admitted to the Eastern Penitentiary in September, 1882. Sixteen years of his life were spent in various prisons under different sentences.

His medical history dates back sixteen months ago, when he complained of pain between the shoulders, but he continued in comparatively good health until six months ago, when he began to complain of diffuse intercostal pains in both sides and pain in the epigastrium; also poor appetite, nausea, and indigestion; anæmia and general debility. Upon careful examination, no organic disease was discovered. The heart was rather weak, but otherwise normal. Thoracic percussion was normal, except slightly increased dulness under upper part of the sternum. Pulse feeble, but otherwise normal. There was no syphilitic history, no œdema, no palpitation of the heart or præcordial pains, and no interscapular pain during the past year. No bulging of the chest-walls, either anteriorly or posteriorly. No discoverable aneurismal bruit. In fact, there was nothing to indicate any organic disease. The scae was examined by six reputable physicians, and all of them arrived at the same negative conclusion. The patient's physical condition steadily grew worse, and he was given the liberty of a large yard, excused from work, and allowed a plentiful nutritious diet, general tonics, and anodynes for the neuralgia. Under this treatment he seemed to improve, but the neuralgia and insomnia continued.

On August 28, 1883, while sitting in the yard, he suddenly grew very pale, complained of faintness, and was caught while in the act of falling to the ground. He was carried to the hospital department and given stimulants. The physician arrived in a few minutes, and found him dying.

At a post-mortem examination, a large tumor, found just above the heart, proved to be an aneurism of the posterior ascending portion of the aorta. The sac contained one and a half pints of freshly clotted blood, unorganized, and its posterior wall was formed from three dorsal vertebræ, the bodies of which were very much eroded. There was also some erosion of the corresponding ribs, and a slight bulging of the sac between them. The heart was very small, but free from disease. No other organic trouble observed.

A careful review of the case suggests the following thoughts: 1. That the disease was one of long standing, and that on account of the enforced quiet life of the subject, no inconvenience was experienced until erosion of the vertebræ was so extensive as to cause neuralgia of the adjacent nerves, and slight interscapular pain of but short duration. 2. That the case was rendered still more obscure by the facts that the opening into the sac was large, and that considerable portion of the sac-wall was made up of bone—both of which tend to destroy the possibility of there being a diagnostic aneurismal bruit. 3. That if there had been much interscapular pain, due to the erosion of the vertebræ, and it had been treated by introducing a seton or issue in its vicinity, as has been lately recommended (Thomas Hayden, Quain's *Med. Dict.*), there would have been considerable danger of puncturing that portion of the sac protruding between the ribs. 4. That there can be a very large thoracic aortic aneurism without any bulging of the chest-walls, and that it may erode much of the bodies of the vertebræ without causing spinal curvature. 5. That as there was no hemorrhage into the thoracic cavity or canal of the spinal cord, death must have been due to pressure on some of the cardiac nerves or ganglia, and consequent collapse from heart-failure.

CORRESPONDENCE.

CELSUS ON THE TREATMENT OF HYDROPHOBIA.

"*Dos est magna Parentium virtus.*"

To the Editor of The Medical News.

Sir: The virtue of our ancestors is a grand inheritance, and we must treasure their reputation. The humanity and devotion of our predecessors in our noble profession are what we have a right to feel proud of, and anything that calls them in question, even if inadvertently, may well arouse a feeling almost of resentment.

In a recent article in the *Philadelphia Medical Times*, headed "Remarks on Hydrophobia," I find the following statement made in regard to the treatment recommended by Celsus for hydrophobia: "Celsus advised throwing the victim of hydrophobia unexpectedly into a pond, where, if he could not swim, he was allowed to sink, and, if he could, he was held under until he was full of water." It would appear from this that Celsus, who is one of the glories of our profession, whom very great men have styled *admirabilis in omnibus, medicorum deus*, the Cicero of medicine, was very deficient in ethics. I wish, therefore, to offer a translation in full of the treatment he gives for hydrophobia, in defence of one so distinguished:

"The bite of a mad dog, when no remedies have been used, causes ordinarily a fear of water, called by the Greeks hydrophobia. This is one of the most frightful accidents, wherein the patient is tormented by thirst and by fear of water. When the disease has gone this far, there is little hope left. The only remedy that we can try is to throw the patient unexpectedly into a pond, to let him sink to the bottom several times if he does not know how to swim, that he may drink, and then to bring him up: if he swims, he is to be pushed under at different times, and forced to drink, whether he wishes or not; in this way, we succeed in driving away thirst and the fear of water. This method is not without danger, for if the patient has a bad constitution, the cold water may give him convulsions that will kill him. To prevent this, it is right to put the patient in a bath of warm oil as soon as he is taken from the water."

In a report on the Duval prize, for the year 1854, Broca used the following language, which is so admirable as to require no additional comment:

"There is a false erudition that consists in citing at second-hand, on the faith of others, authors never read, and in copying bibliographical references that have been transmitted from one book to another, every time with some alteration, without any one ever taking the trouble to verify them.

"In this way, a writer succeeds in furnishing a text all sprinkled with citations, and gives himself at little cost a varnish of erudition and of polyglottism that fills the reader with admiration. Many reputations have been built upon such foundations. These reputations have been or will be merely momentary, because they are badly constructed. When any one acts in this way, he becomes, without wishing it, the falsifier of science."

Nescire quid anteaquam natus sis acciderit id est semper esse pucrum, Cicero tells us very truly. The very *father of medicine*, as we now call him, twenty-two centuries ago wrote on *Ancient Medicine:* he tells us that "numerous and excellent discoveries have been made in the long course of ages, and that he who rejects and disdains the past deceives himself and deceives others." It is most praiseworthy to search into the teachings of the great physicians of past ages, and to cite their doctrines and their methods, but let it be done with a strict regard to correctness, and, it may be added, with the respect and the reverence that are owing to our honored *confrères*, or rather forefathers.

LOUIS W. ATLEE, M.D.

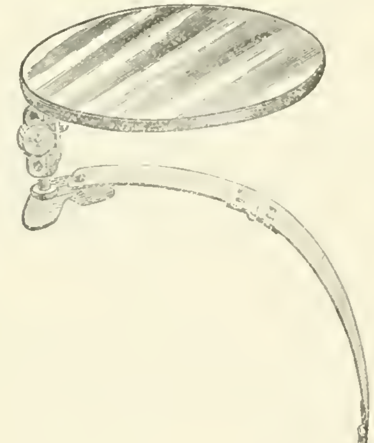
AN IMPROVED ATTACHMENT FOR THE HEAD-MIRROR.

To the Editor of THE MEDICAL NEWS.

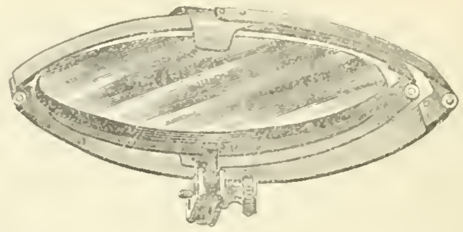
SIR: The issue of THE MEDICAL NEWS of a few weeks ago contained a description of an attachment for the head-mirror, consisting in a continuous steel band, which clasps the head, extending from forehead to occiput.

The advantages of any such contrivance over the miserable rubber bands in such general use are manifest; therefore I desire to call attention to an invention of Mr. Ivan Fox, optician, of this city, which I have been using for the past fifteen months, which far surpasses every other device for the purpose, and seems to leave nothing to be desired in the way of perfection.

Two bands of steel, three-quarters of an inch wide by three inches in length, rest horizontally, one on the forehead, and the other on the occiput, and these pieces are connected by a band of similar width passing over the vertex. To the piece on the forehead the head-mirror is attached by a double ball-and-socket joint, which is kept tight or looser by a binding-screw. This allows free play to the mirror. The vertical band is made of four separate pieces, joined by three delicate hinges on the under side. These hinges are placed at such intervals that when the mirror is not in use, the whole attachment wraps compactly around the glass affording complete protection in carrying.



By a slight turn the horizontal forehead piece is brought flat against the back of the mirror, when the first piece of the vertical band reaches to the rim of the glass, where a hinge allows the second longer piece to lap over the reflecting surface, on the opposite side of which the second hinge drops the third piece across the back, and this is hinged again to the last piece which falls on the face, and the glass is now completely protected by the horizontal occipital band lying at right angles to the others across the centre. The whole thus folded will slip into any pocket in which the mirror alone could be easily carried.



When opened for use, the ends are five inches apart; they are then *sprung* a little further out, and laid on the head. It then takes a firm grasp, and gives a solid support to the mirror.

Contrasted with a rubber-band and buckle encircling the head, the advantages may be claimed, that of *protection* of the mirror from injury when laid aside; that it is *quickly* and easily applied; that it is *neat*, never disordering the hair by any number of adjustments, and this is one of the most important points; and that having a firm basis of support, it gives perfect *precision* in reaching and keeping in view any objective point. Respectfully yours,

HOWARD A. KELLY, M.D.

323 SOUTH SEVENTEENTH STREET,
PHILADELPHIA.

NEWS ITEMS.

YELLOW FEVER IN HAVANA.—There were nine cases of death from yellow fever in Havana last week, and twelve the week before.

YELLOW FEVER AT VERA CRUZ.—There were thirteen deaths from yellow fever at Vera Cruz for the week ending September 13th.

AMERICAN ACADEMY OF MEDICINE.—The American Academy of Medicine will meet at the New York Academy of Medicine, on Tuesday, October 9 (three o'clock), and Wednesday, October 10. The Address by Dr. H. O. Marcy, of Boston, Mass., President, will be on "The Recent Advances of Sanitary Science; the Relations of Micro-organisms to Disease." The following papers have been promised for the general meetings: Dr. L. S. Pilcher, of Brooklyn, N. Y., on "The Relations of Medical Journalism to Higher Medical Education in America." Dr. Traill Green, of Easton, Pa., on "The Imperfection of Technical Studies as a Means of Mental Culture." Dr. Benjamin Lee, of Philadelphia, on "The Value of an Acquaintance with Botany as a Preliminary to the Study of Medicine." Dr. Charles McIntire, of Easton, Pa., "Is it Fair? The Study of the Comparative Political Position of the Medical Profession in the United States." Dr. A. D. Rockwell, of New York, on "The Exact Value of the Electrolytic Method." Dr. J.

Cheston Morris, of Philadelphia, "The Milk Supply in Large Cities." Dr. Charles E. Cadwalader, of Philadelphia, "Considerations upon the Public Provisions for the Care of the Indigent Insane." Dr. A. D. Rockwell, of New York, "The late Dr. George M. Beard—a Sketch." Report of the Committee on Laws of Medical Practice in the United States and Canada.

The Meeting of the American Public Health Association.—Among those who will present papers at the next meeting of this Association, to be held at Detroit, on November 13th, are Surgeon Sternberg, U. S. A., and Surgeon Woodhull, U. S. A., on *Malaria*. Surgeon Smith, U. S. A., and Dr. Solmon of the Agricultural Department, on *Texas Cattle Disease*. Rudolph Hering, C. E., and Commissioner Raymond, of Md., on *House Drainage and Sewerage*. Prof. Sargant and Prof. Watson, on *Physical Exercises for Schools*, and Prof. A. R. Leeds and Dr. Wm. R. Newton, on *Food Adulterations*.

New Medical Journal.—The first number of *The Texas Courier-Record of Medicine*, edited by Drs. F. E. Daniel and E. L. Stroud, Fort Worth, Texas, is lately received. It will be published monthly.

The Foot and Mouth Disease in Great Britain.—The latest reports state that this disease is spreading with remarkable rapidity throughout the counties of Derby, Lancashire, Suffolk, and Denbighshire.

In the twenty-five weeks ending September 8th, there were, according to the weekly returns in the *London Gazette*, 5600 fresh outbreaks reported, and 145,218 animals attacked.

The Koch Mission.—Dr. Koch arrived in Egypt on August 23d, and went immediately to the Greek Hospital to make post-mortem examinations of persons dead of cholera.

Biological Laboratories: their Organization and Value.—Prof. E. Ray Lankester, in his Address on Biology, delivered before the British Association for the Advancement of Science, on September 21st, advocated the endowment of research, especially in biology, urging that in the past it had produced discoveries of the greatest service to humanity, and that it was retarded in England by the want of means to prosecute it. In the following extract he compares England and Germany in the endowment of research, and gives an interesting sketch of the basis of organization of the German laboratories.

The knowledge of the growth of the chick from the egg and of other organisms from similarly constituted beginnings has been slowly and continuously gained by prodigious labor, extending over generation after generation of students who have occupied the laboratories and lived on the stipends provided by the governments of European States—not English, but chiefly German. It is this history of the development of the individual animal and plant from a simple homogeneous beginning to a complex heterogeneous adult which has furnished a starting-point for the wide-reaching doctrine of evolution. It is this knowledge, coupled with the knowledge of the myriad details of structure of all kinds of animals and plants which the faithful occupants of laboratories and the guardians of biological collections have in the past one hundred years laboriously searched out and recorded—it is this which enabled Darwin to propound, to test, and to firmly establish his theory of the origin of species by natural selection, and finally to bring the origin, development, and progress of man also into the area of physical science.

It may be laid down as a general proposition that scientific discovery has only been made by one of two classes of men, namely: 1. Those whose time could be devoted to it in virtue of their possessing inherited fortunes; (2) Those whose time could be devoted to it in virtue of their possessing a stipend or endowment especially assigned to them for that purpose. Those who wish to defend the present neglect of the Government, and of public institutions, to provide means for the carrying on of scientific research in this country, are accustomed to declare as a justification for this neglect that we do very well without such provision, inasmuch as the cultivation of science here flourishes in the hands of those who are in a position of pecuniary independence. The reply to this is obvious. If those few of our countrymen who, by accident, are placed in an independent position, show such ability in the prosecution of scientific research, how much more would be effected in the same direction were the machinery provided to enable those also who are not accidentally favored by fortune, to enter upon the same kind of work?

It is altogether a mistake to suppose that the existence among us of a few very eminent men is any evidence that we are contributing largely to the hard work of careful study and observation, which really forms the material upon which the conclusions of eminent discoverers are based. In every department of biological knowledge the hard work of investigation is being carried on by the well-trained army of German observers. Whether you ask the zoölogist, the botanist, the physiologist, or the anthropologist, you will get the same answer. It is to German sources that he looks for new information; it is in German workshops that discoveries, each small in itself, but gradually leading up to great conclusions, are daily being made. To a very large extent the business of those who are occupied with teaching or applying biological science, in this country, consists in making known what has been done in German laboratories. Our English students flock to Germany to learn the methods of scientific research; and to such a state of weakness is English science reduced for want of proper nurture and support, that even on some of the rare occasions when a capable investigator of biological problems has been required for the public service, it has been necessary to obtain the assistance of a foreigner, trained in the laboratories of Germany.

In the German Empire, with a population of 45,000,000, there are 21 universites. These universities are very different from anything which goes by the name in this country. Among its other arrangements devoted to the study and teaching of all branches of learning and science, each university has five institutes or establishments devoted to the prosecution of researches in biological science. These are respectively the physiological, the zoölogical, the anatomical, the pathological, and the botanical. In one of these universities of average size each of the institutes named consists of a spacious building containing many rooms fitted as workshops, provided with instruments, a museum, and, in the last instance, with an experimental garden. All this is provided and maintained by the State.

It is the business of the professor, in conjunction with his assistants and the advanced students, who are admitted to work in the laboratories free of charge, to carry on investigations, to create new knowledge in the several domains of physiology, zoölogy, anatomy, pathology, and botany. It is for this that the professor receives his stipend, and it is on his success in this field of labor that his promotion to a more important or better paid post in another university depends. In addition to, and irrespective of, this part of his duties, each professor is charged with the delivery of courses of lectures and of elementary instruction to the general students of the university, and for this he is allowed to charge a certain fee to each student, which he receives himself. The total of such fees may, in the case of a largely attended university and a popular subject, form a very important addition to the professorial income; but it is to be distinctly understood that such payment by fees is only an addition to the professor's income, quite independent of his stipend and of his regular occupation in the laboratory; it is paid from a separate source, and for a separate object.

There are thus in the German Empire more than one hundred such institutes devoted to the prosecution of biological discovery, carried on at an annual cost to the State of about £80,000, equal to about £160,000 in England, providing posts of graduated value for three hundred investigators, some of small value—sufficient to carry the young student through the earlier portion of his career, while he is being trained and acting as the assistant of more experienced men—others forming the sufficient but not too valuable prizes which are the reward of continuous and successful labor.

In addition to these university institutes, there are, in Germany, such special laboratories of research, with duly salaried staff of investigators, as the Imperial Sanitary Institute of Berlin, and the large museums of Berlin, Bremen, and other large towns, corresponding to our own British Museum of Natural History. There are, in addition to the universities in Germany, a number of other educational institutions, at least equal in number, which are known as polytechnic schools, technical colleges, and agricultural colleges. These furnish posts of emolument to a limited number of biological students, who give courses of instruction to their pupils, but they have not the same arrangements for research as the universities, and are closely similar to those colleges which have been founded of late years in the provincial towns of England, such as Bristol, Nottingham, and Leeds. The latter are sometimes quoted by sanguine persons, who are satisfied with the neglected condition of scientific training and research in this country, as really sufficient and adequate representatives of the German universities. As a matter of fact, the excellent English colleges in question do not present anything at all comparable to the arrangements of a German university, and are, in respect of the amount of money which is expended upon them, the number of their teaching staff and the efficiency of their laboratories, inferior not merely to the smallest German university, but inferior to many of the technical schools of that country.

A Polluted Mineral Spring.—*The British Medical Journal*, Aug. 18th, calls attention to a curious instance which has just been brought to light of the contamination with sewage-matter of a well that has long enjoyed a high reputation for its salutary virtues. When visiting in the south of Scotland lately, Dr. Crichton Browne, who, like all good Scotchmen, is a devoted admirer of Burns, made a pilgrimage to the Brow Well, a small village on the shores of the Solway Firth, where the great national poet, by the advice of his medical attendant, spent the last fortnight of his life in a despairing effort to repair his shattered health. Struck by the character of the water of the Brow Well, and by the accounts which he received of its beneficial effects in gastric, renal, and nervous affections, Dr. Crichton Browne determined to have it analyzed, and, for that purpose, sought the aid of Professor Dewar, at the Royal Institution. Professor Dewar's analysis shows the water to be of a unique description, and suggests that it may have valuable medicinal properties; but, at the same time, it reveals the fact that it is strongly tinctured with sewage. It seems probable that the drainage from the adjoining cottages and pigsties, and from the heavily manured lands in the neighborhood, finds its way into the well. Professor Dewar thinks that it ought to be closed, in the interests of the community, until means can be taken to insure its purification, as large numbers of invalids resort to it at this season of the year, and drink freely of the water, of which the regulation quantity is six pints *per diem*.

Health in Michigan.—Reports to the State Board of Health, for the week ending September 22, 1883, indicate that consumption, rheumatism, and inflammation of the brain have increased, that dysentery has considerably decreased, and that remittent fever, intermittent fever, erysipelas, cholera infantum, neuralgia, and pneumonia have decreased in area of prevalence.

Including reports by regular observers and others, during the week ending September 22, and since, diphtheria was reported present at twenty places, namely, Clam Lake, Coldwater, Detroit, East Saginaw, Forestville, Grand Rapids, Hastings, Ida, Lansing, Lowell, Manistee, Mt. Pleasant, Newberry, Pontiac, Reading, Sherman, Somerset, St. Joseph, South Arm, and Utica. Scarlet fever at seventeen places: Bingham, Cadillas, Charlotte, Detroit, East Saginaw, Edmore, Grand Rapids, Ithaca, Kalamazoo, Manistee, Mendon, Nashville, Northport, North Adams, Port Huron, Six Lakes, and Tyrone. Measles at four places: Charlevoix, Detroit, Ithaca, and Union City.

NOTES AND QUERIES.

CORRIGENDA.

Page 355, second column, eleventh line, for "once in 19 or 20 cases," read "once in 1900 cases." Thirty-ninth line, for "liq. plumb. subsulph.," read, "liq. ferri subsulph."

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM SEPTEMBER 24 TO OCTOBER 1, 1883.

Tilton, H. R., *Major and Surgeon.*—Assigned to duty as Post Surgeon at Fort Wayne, Michigan.—*Par. 4, S. O. 183, Department of the East*, September 28, 1883.

Brechemin, Louis, *Captain and Assistant Surgeon.*—Relieved from duty at Fort Columbus, N. Y, H., and assigned to duty at Fort Wadsworth, N. Y.—*Par. 5, S. O. 183, Department of the East*, September 28, 1883.

De Loffre, A. A., *Captain and Assistant Surgeon.*—Assigned to duty at Fort Niagara, N. Y.—*Par. 5, S. O. 182, Department of the East*, September 27, 1883.

Havard, Valery, *Captain and Assistant Surgeon.*—Assigned to temporary duty at post of San Antonio, Texas.—*Par. 10, S. O. 120, Department of Texas*, September 21, 1883.

Reed. Walter, *Captain and Assistant Surgeon.*—Relieved from duty at Fort Omaha, Neb., and assigned to duty as Post Surgeon, Fort Sidney, Neb.—*Par. 5, S. O. 103, Department of the Platte*, September 22, 1883.

Appel, A. H., *First Lieutenant and Assistant Surgeon.*—Assigned to temporary duty at Fort Warren, Mass.—*Par. 3, S. O. 181, Department of the East*, September 25, 1883.

Carter, W. F., *First Lieutenant and Assistant Surgeon.*—Assigned to temporary duty at Washington Barracks, D. C.—*Par. 5, S. O. 182, Department of the East*, September 27, 1883.

Richard, Charles, *First Lieutenant and Assistant Surgeon.*—Relieved from further duty at Creedmoor, New York, to return to his proper station, Fort Adams, R. I.—*Par. 1, S. O. 180, Department of the East*, September 24, 1883.

Richard, Charles, *First Lieutenant and Assistant Surgeon.*—Granted leave of absence for two months, with permission to apply for extension of two months.—*Par. 1, S. O. 49, Military Division of the Atlantic*, September 25, 1883.

Wakeman, William J., *First Lieutenant and Assistant Surgeon.*—Relieved from temporary duty at Fort Sidney, Neb., to rejoin his proper station at Fort D. A. Russell, Wyoming.—*Par. 5, S. O. 103, Department of the Platte*, September 22, 1883.

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

Vol. XLIII. Saturday, October 13, 1883. No. 15.

ORIGINAL LECTURES.

LOCOMOTOR ATAXIA.

A Course of Three Lectures delivered before the Cincinnati Medical Society.

By PHILIP ZENNER, A.M., M.D.,

OF CINCINNATI, OHIO.

LECTURE I.

SYMPTOMATOLOGY.

Gentlemen: The frequent occurrence of locomotor ataxia, the importance of its early recognition, and the many interesting physiological and pathological questions involved, will, I trust, be sufficient justification for speaking rather fully on the subject. Yet I do not propose to treat it exhaustively. For instance, some trophic changes, diseases of joints, affections of bones, finger-nails, etc., which have been largely dwelt upon of late years; certain symptoms on the part of the central nervous system, as hemiplegias, paraplegias of short duration, will be passed by without further notice. For, though of great interest in themselves, they do not help us to a clear idea of this disease; their pathology is obscure, and their relationship with locomotor ataxia not fully determined. But I wish rather to give a clear description of this disease, bringing into prominence practical things, especially such as are of great diagnostic value, and to dwell at some length on the physiological and pathological questions involved. It is true that in the latter we shall find far more questions entirely unanswered than facts definitely ascertained. But for purposes of scientific progress it is always important to know what are the present limits of our knowledge, what problems are yet unsolved or to be solved.

Locomotor ataxia may be briefly described as clinically represented by characteristic lightning-like pains, sense of numbness or formication in the legs, peculiar perversion of tactile sensation in the soles of the feet, so that the ground does not feel natural, anæsthesia, ocular paralysis, disturbances of the genital functions, of the bladder, rectum, and other viscera, but most prominently a loss of muscular coördination, an ataxic gait. As a pathological substratum for these symptoms, we find degenerative changes chiefly in the posterior portions of the cord.

We will begin with the symptomatology, as we shall later be able to take up with greater interest the physiological and pathological questions. In the beginning the most prominent symptoms are pains, I might say characteristic pains, most frequently in the back and legs. These pains are very sudden in their onset, so sudden that they are usually termed lightning pains, and are described as of a boring, pressing, tearing, or shooting character. They occur sometimes in limited portions of the skin, more frequently in the deeper parts, the calves of the legs, joints, bones, etc. They often persist in one part, and become very agonizing in intensity. These pains come in paroxysms, which may be of only a few seconds or minutes duration, or continue for hours or days, each paroxysm being composed of a large number of single pains of the kind already described. The free intervals are also of various duration, sometimes only a few hours or days, sometimes many months intervene before a recurrence of the paroxysms. These are also of various degrees of severity. In some they are so mild that it is difficult for the physician to elicit an account of them in taking the history, the patient looking upon them as mere rheumatic pains that require no mention. In others, the pains are so intense that they make existence a constant torture. Changes in weather, mental excitement, etc., often have a deleterious influence, bringing on or increasing the severity of the paroxysm. Though, as already mentioned, these pains most frequently occur in the back and legs, they sometimes occur, then usually at a later period, in the upper extremities, even in the face or occipital region. They are generally the first symptoms of the disease, and may occur many years before the development of ataxia. They usually persist during the whole duration of the disease, though not infrequently they become milder at a later period and even disappear altogether.

Though they are described differently by different individuals, there is that about them, their sudden onset, their paroxysmal occurrence, etc., which usually enables us to recognize them easily. Of the other anomalies of sensation, we may mention first what is termed girdle sensation, a sense of constriction or painful pressure about the waist. This is very frequently present. There is often a sense of numbness, of formication, or of coldness or heat about the legs moving from part to part. But the most noticeable of these parasthesias is a peculiar perversion of the tactile sensation of the soles, so that the ground or floor does not feel hard as usual, but one feels as though walking upon some yielding surface, velvet, or cork, or bladders of water.

One of the most common symptoms is anæsthesia, so that the touch, pinching, etc., are not so distinctly felt or are not properly localized. This, though perhaps the most common sensory manifestation does not usually appear as early as the symptoms previously mentioned. It is often only noticeable when the ataxic symptoms have also appeared. We never find complete anæsthesia, such as often is present in hysteria and in organic disease, destroying the sensory tracts. Sometimes it is so slight that the patient knows nothing of its presence, and it is only detected on the careful physical examination of the physician; again it is so marked that the patient himself calls attention to it. It is usually greater in some parts than in others, as over the soles, calves, in the trunk between the shoulders and in the sacral region, in the upper extremities on the ulnar side of the hands and arms. Some peculiarities of the anæsthesia are deserving of mention. There is often partial anæsthesia, some kinds of sensation being impaired, others not. For instance, the sense of pain is lost while the tactile sensation is unimpaired; this is called analgesia. The opposite is found, tactile sensation is impaired, and the sense of pain is retained. Usually the sense of pressure is earliest lost, while the appreciation of temperature, the ability to distinguish hot and cold, is longest retained. Then there are peculiar anomalies which have been termed retarded and double sensation. If the surface be touched, it is not felt immediately, but only after the lapse of several seconds is the contact observed. Or different kinds of sensation may be conveyed with varying rapidity; one is pricked with a pin, either immediately or after an interval of time the sense of contact is appreciated, then a few seconds intervene before there is also the sense of pain. There are some other peculiarities of this kind which cannot be dwelt upon here. But the anæsthesia does not alone involve the integument, the deeper parts, muscles, bones, joints, etc., are also thus affected. Probably due to this, we very frequently find that the patient loses knowledge of the position of his limbs. If, when he is in bed and with eyes closed, you place his limbs in strange positions, he can neither tell where they are nor in what posture, and has probably also not felt the passive movements.

We will next mention a symptom allied to the preceding and perhaps also to that which will follow it—ataxia. That is what has been termed Romberg's symptom. While the patient can still walk with no apparent difficulty, if told to stand with closed eyes, he is observed to waver, and, when the condition is well marked, may fall to the ground. This appears to be directly dependent on the anæsthesia. At least Erb mentions that even in cases of ataxia it is never present unless there is also anæsthesia. Indeed, it is sometimes the first indication of the latter, pointing to its presence even when the most careful objective examination leaves the physician in doubt. The symptom may be thus explained. The maintenance of the equilibrium of the erect position is due to our knowledge of our position in space, a knowledge due to the constant centripetal impressions to the sensorium from the periphery through the cutaneous, muscular sensation, vision, etc. When the cutaneous and muscular sensations are impaired, if the vision is also excluded, our knowledge of our position in space becomes obscured, we waver or fall to the ground.

We now approach the most prominent symptom of this disease—that which has given it its name: the loss of muscular coördination; the ataxic gait. We have here the singular anomaly that individual acts can no longer be performed with precision and accuracy, or not at all, while the muscular power upon which they depend is not at all impaired. Previous to the development of the ataxic gait, the patient observes a feeling of heaviness and stiffness in his limbs. He tires easily. He first notices some difficulty in ascending a flight of stairs, in arising from a chair, in suddenly turning around, walking on a smooth floor, etc., all of which difficulties are greater at night. Walking is difficult just after rising in the morning, also changing from a rapid to a slow, or a slow to a rapid gait; while at this time, in an ordinary even gait by daylight, nothing peculiar is observed. The ataxic gait is first noticeable through a certain irregularity or awkwardness in its performance. When it becomes well marked, its peculiarities are observed by every one. The feet are usually raised higher than necessary, are thrown outward and forward in a jerky manner, and the heels fall in a stamping manner to the ground. The knees are held stiff, and the eyes are constantly directed toward the feet.

The ataxia, though most marked and most frequent in the lower extremities, occurs sometimes, though generally at a later period, in the upper extremities, and even in muscles of the trunk and face. In the hands it is first observed in performing delicate actions, picking up a pin, writing, etc. The ataxic movements are always most marked in the dark or when the eyes are closed. The ataxic manifestations vary greatly as regards the rapidity of their development. Sometimes, very shortly after they are first observed, they already become excessive, but more frequently years pass before the ataxia becomes marked. At times it improves considerably, the improvement being of some duration; again it becomes suddenly worse through the effects of cold or the like. Ataxia is not the only muscular symptom; very frequently there is considerable muscular weakness in the earlier stages, and at a later period true paralysis is no uncommon sequel.

We will now speak of a number of visceral symptoms. The genital functions are often affected. In the beginning there is often an increase of sexual appetite, but when the disease is advanced, the sexual functions and appetite are usually lost. There is often a slight disturbance of the bladder, slight incontinence, or slight retention; the latter should never be overlooked, as it may cause serious cystitis. Rectal symptoms are less common, most frequently a slight anæsthesia, so that the feces escape without the knowledge of the patient. But paroxysms of pain of a spasmodic character, both in the rectum and in the bladder or urethra, are not uncommon symptoms, and are probably allied in character to the lightning pains of this disease. Pains, probably of the same nature, attack also other internal organs, so that we find paroxysms of gastralgia, nephritic colic, etc.; of these the most common and distressing are the paroxysms of gastralgia. These are sometimes very severe, and may be accompanied by vomiting, vertigo, and even temporary diminution of urine and albuminuria. I was called to such a case recently in the middle of the night, where no history excepting that of the present attack of gastralgia could be obtained. But when the patient called at my office some days later, a casual examination was sufficient to reveal the presence of the well-developed disease. He then informed me that he had been under medical treatment for some years for rheumatic pains.

We now approach a series of symptoms, which, to the untutored, appears less noticeable as symptoms of spinal disease, but which has the highest diagnostic value, and first the ocular symptoms. Paralysis of the external or internal muscles of the eye, causing ptosis, strabismus of various kinds, irregularity of the pupils, etc., belong to the most common symptoms of locomotor ataxia. They are present in more than two-thirds of all the cases of that disease, and, further, they belong usually to the initial symptoms. They are frequently of temporary duration. Strabismus or the like will occur at an early period, disappear after a few weeks or months, perhaps recurring at various periods to again disappear, though when the paralyses occur at later periods, they are likely to remain permanently. I do not wish to dwell longer upon these ocular paralyses further than to mention specially one form, that is what is termed spinal myosis or Argyle-Robertson phenomenon. Here the pupils are much contracted, they do not respond to light, neither become larger in a darkened chamber, nor contract when a bright light is brought before them, but do contract during the act of accommodation. I mention this symptom because it is almost pathognomonic of this disease. I do not know of its occurrence in any other disease.

The other ocular symptom I shall mention is one especially noticeable, as it is the greatest affliction with which the patient is visited—amblyopia or amaurosis. This is less frequently found than the other ocular symptoms, but it is frequently present. Cyon found it in sixty of two hundred and three cases; Erb in eight of seventy cases. It is also frequently an early symptom. I have seen one case in which it preceded the ataxia fully ten years. The vision generally begins to fail at the periphery, central vision being longest retained. It varies very greatly in the rapidity of its development, sometimes complete blindness occurring soon after the first impairment of vision, more frequently being slow in its development. Some believe that its progress is sometimes checked by hypodermic injections of strychnia. The amaurosis is due to degenerative changes in the optic nerve, apparently quite like those we will later have occasion to observe in the posterior columns of the spinal cord. The disease begins in the nerves, and extends backward into the optic tracts, sometimes reaching the corpora quadrigemina.

The symptom of which we will now speak is one of prime importance in the diagnosis: it is the condition of the tendon reflexes, the absence of the patellar tendon-reflex. That a blow upon the ligamentum patellæ would cause a sudden contraction of the quadriceps femoris has long been known, but it was only after Westphal pointed out that this phenomenon cannot be elicited in cases of locomotor ataxia that it began to assume a clinical importance. Since then, very much attention has been paid to the subject. Much has been experimented and written about the nature of this phenomenon. This question, not yet settled, will not detain us here; but its clinical value is a subject of so much importance that I may be pardoned for dwelling upon it at some length. This phenomenon can be almost always elicited in health. Berger examined over fourteen hundred persons, and failed to detect it in less than two per cent. of the cases. Eulenberg examined a large number of adults and children, and failed to find it in about five per cent. of all the cases. Westphal claimed, until very recently, that he never failed to find it in healthy persons. I have myself examined a large number of healthy persons, and have never failed to find it in adults. In one, a young man of about eighteen years of age, I succeeded in obtaining it at some times, and failed at others. Why this difference, I do not know. Usually it is very easy to elicit this phenomenon; but when it is difficult, it will not suffice to merely examine the patient in the ordinary manner, that is, when one knee is thrown over the other, to give a tap on the tendons; but one must rather lay the knees bare, have the patient sitting upon a table, so that the feet swing freely, and then tap upon every part of the ligamentum patellæ. Only after a fair trial of this kind can it be said that the patellar tendon-reflex is absent.

Westphal believes that this phenomenon is always absent in locomotor ataxia. Some physicians of prominence have believed that they found it still present in typical cases of this disease. I have seen one case of very excessive ataxia, where the patellar tendon-reflex was even exaggerated. But this case, in its entire history as well as in the special appearance of the ataxia, was quite different from ordinary cases of locomotor ataxia. But even though this phenomenon be sometimes present in the disease, and though it be occasionally absent in healthy persons, each of these are such rare occurrences as scarcely to detract from its diagnostic value. And its value is the greater because its absence is noticed in the early periods of the disease, and is often its first indication.

The latter symptoms mentioned, the ocular manifestations, the absence of the patellar tendon-reflex, should never be forgotten when trying to make a diagnosis in an obscure case. They will often enable us to make a diagnosis early in the disease, and, what is of equal if not of greater value, will often enable us to exclude the existence of this disease. Patients will often come to you with what is termed spinal irritation, neurasthenia, and the like, with flying pains in various parts of the body, feelings of numbness and formication, inability to stand with closed eyes, etc., believing that they are suffering with some organic disease. If you examine carefully into their history, observe that the patellar tendon-reflex is present, that there are no ocular symptoms, none on the part of the bladder or rectum, you can inform such patients with a great degree of assurance that they are not suffering with any organic disease. You thus relieve their minds of a great weight of anxiety, and by removal of causes and proper general treatment may soon restore them to complete health.

I will mention one other set of symptoms—perhaps I should rather say complications—of this disease, that is, the mental symptoms.

Moelli has found mental disease in seventeen of eighty-nine cases of locomotor ataxia. Of these, ten were general paralysis or other dementia, four had delusions of persecution, and three were hypochondriacs. General paralysis is the most frequent complication of this disease. Not infrequently the degenerative changes in the cord of locomotor ataxia develop during the history of general paralysis. But in that case the spinal are obscured by the mental symptoms. When general paralysis develops in a case of locomotor ataxia, it is often slower in its progress and milder in its character than is usual in the typical disease.

Herewith we have mentioned the most prominent symptoms, and though some have been omitted and some but slightly noticed, I believe enough has been said to give a distinct picture of the disease, and to enable one always to make a diagnosis where a diagnosis is possible. And now a few words on the progress and duration of the disease. Usually we have, then, in the earlier stages, lightning pains, girdle sensation, formication and numbness, perverted sensation of soles, ocular symptoms, disturbances of bladder, rectum, and genital functions, and absence of patellar tendon-reflex. This earlier stage, before the appearance of ataxic manifestations, may be of very short or very long duration. Sometimes only a few weeks elapse after the first symptoms are manifested before the ataxia appears. More frequently a year or more intervenes, and sometimes ten, fifteen years, or more. In the second stage, we find the anæsthesia and ataxia. This stage, too, may be of very short or very long—ten or twenty years—duration. The last stage is called the paralytic one, in which there is true paralysis, sometimes atrophy of muscles, sometimes cystitis, decubitus, marasmus, leading to a fatal termination. This stage, like the preceding, may be of indefinite duration. Leyden, in his most recent article on the subject, mentions a case then under observation, which had already been twenty years in what was termed the paralytic stage. In fact, the disease in itself rarely leads to a fatal termination, and yet patients suffering with it do not usually grow old, owing to their being more subject to accidents, and to their having less power to resist intercurrent diseases.

ORIGINAL ARTICLES.

CRUSH OF BOTH LOWER EXTREMITIES, AND TWO COMPOUND DEPRESSED FRACTURES OF THE SKULL;

SIMULTANEOUS AMPUTATION OF LEFT LEG AND RIGHT THIGH; RECOVERY.

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SOUTH BETHLEHEM, PA.

GOTTLIEB F., æt. 29 years, German, married, admitted May 8, 1883. About three hours before admission, while walking on the railroad, the patient stepped from one track to another, in order to avoid a train moving towards him, only to be struck by a locomotive coming from behind. He was picked up immediately, and brought as soon as practicable to the hospital. A period of about three hours intervened, however, between the time of the accident and that of the examination at the hospital. The examination showed that the left foot was hanging in shreds, and that the skin was torn off up to the lower third of the external aspect of the leg; the right leg was crushed into a pulp from the foot up to the upper third, the skin being severely contused as far as the middle of this region. Compound depressed fracture at the inner angle of the left orbit through the ciliary ridge, a round, even, cup shaped depression, admitting the end of the index finger. Another fracture, also compound and depressed, at the right frontal prominence. Here the area of depression was larger than the end of one's thumb, and the edges of the contiguous bone were sharp and jagged. Occipital, and the right deltoid regions were severely contused. Slight punctured wound about one inch and a half above the olecranon process on the posterior aspect of the left arm. Patient was conscious; pupils reacted normally, were of normal size and equal on both sides. The patient had recovered sufficiently from the shock to answer intelligently and quickly. Hands warm, and surface of skin had recovered its normal healthy hue and temperature. Pulse of pretty good volume, but rapid and compressible. No attempt had been made, previous to his admission into the hospital to control the hemorrhage, so that the patient had lost a great deal of blood before his arrival, and was fast becoming exsanguinated. The first care after getting him on the table, therefore, was to apply an Esmarch bandage to both extremities. A full dose of morphine was then administered hypodermically, and he was etherized as quickly as possible. While my senior assistant, Dr. Cartmell, amputated the left leg through the lower third by the lateral flap method, I amputated the right extremity through the femoral condyles, as follows: Long oval anterior and short posterior skin flaps were formed, circular division of muscles and tendons, the condyles of femur were sawn slightly obliquely from above downward, then the tendon of the quadriceps femoris was divided from within outwards at its attachment to the patella, leaving only a few external fibres and the sheath. The articular surface of the patella was scraped thoroughly by longitudinal scratches with the knife. After the vessels had been tied and hemorrhage controlled, the patella was drawn down carefully, its articular surface placed in apposition with the sawn extremity of the condyles, and secured in position by two silver wire sutures passed deeply through the flaps and through the fibrous covering and attachments of the patella. A medium-size drainage-tube introduced from one angle to the other through the bottom of the wound; flaps carefully fitted together and held in apposition by catgut sutures. Lister dressing applied to each stump. During the operation the pulse sank once or twice, so that it was necessary to give two or three hypodermics of whiskey and ether. The patient reacted quickly and well, notwithstanding his frightful mutilation. He passed a quiet night, and next morning at 8 A.M. pulse was 90 and temp. normal. At 5 P.M. pulse 96, temp. 102° F. Complained bitterly of pain in the right stump, evidently from the traction of the silver sutures.

May 10.—8 A.M. Pulse 108, temp. 100.6° F. Patient suffering agonies from the silver sutures. Inasmuch as he was becoming very nervous, restless, and weak from the pain, I thought it best to remove the offending sutures. I did so, but just as they were withdrawn the patient gave a sudden start and, notwithstanding firm manual support from above downward, the patella was drawn forcibly upwards about one inch, with evident giving way of pretty firm adhesions. An attempt was made to return it to its former place, but was only successful to the extent of bringing it just below the upper rim of the condyles, where, on account of the terrible pain this manœuvre occasioned, I was fain to leave it after securing it by firm strapping with adhesive plaster strips. At succeeding dressings it was drawn a little further down by adhesive plaster, and finally remained firmly and securely.

12th.—8 A.M. Pulse 102, temp. 105°. This was the highest temperature during the whole after-treatment. It subsided readily after a dose of 1.5 gramme quinine and an enema.

From this time on the recovery was very rapid. The right stump healed without suppuration; the left was retarded, and suppurated from a slough of about three-quarters of an inch of injured skin which had been inadvertently included in the flaps. This healed by granulations (but slowly) afterward.

On the thirteenth day after the operation the patient was allowed to get out of bed for the first time. After this he was up daily in a wheel-chair. The wounds in the head seemed to heal very kindly at first, the smaller one, at the ciliary ridge, indeed had cicatrized in about a fortnight. The other and larger one also did well, and was nearly healed externally, when, on the 8th of June, the patient complained of severe headache and had a slight rigor. The next day an abscess had formed. This was freely incised, evacuating a small quantity of thick pus. An examination with a probe showed the bone still bare, and evidently necrotic at the bottom of this cavity. In the course of the following week flat pieces of dead bone were removed from time to time, until they amounted to a superficial area of perhaps the size of a silver quarter, when granulations soon filled the cavity, and in a short time thereafter it was entirely healed. The exfoliated bone was evidently the outer table of the skull. This abscess caused the only "head symptoms" the patient had during his treatment. He was discharged July 7th. The right stump was so firm and painless that he could easily bear his whole weight on it without inconvenience; the left stump had still a superficial ulcer, very small, at the upper angle of the flaps where the skin had sloughed, but was contracting rapidly. Wounds in head entirely healed.

Remarks.—Though double synchronous amputations are not very rare, the case just narrated being the third the reporter has had in the last eighteen months, the percentage of mortality is so overwhelming that a *successful* case of *uncomplicated* double simultaneous amputation, for a railroad crush, is even worthy of record. As far as I have been able to search, I have found not a single recovery recorded after a synchronous amputation of both lower extremities together with *two compound depressed fractures of the skull* in the same individual. I believe, therefore, that I have the honor of recording a unique case of physical stamina, and a successful issue of what was certainly one of the gravest of surgical conditions.

Gross[1] gives the credit of the first known case of double synchronous amputation to Dr. Morris, of Quebec, and states that the introduction of these double amputations is due to the surgeons of the hospital to which Dr. M. was attached—Hotel-Dieu. Since Morris' time almost every surgeon of any hospital practice has had occasion to do these multiple operations more than once. Our surgical literature is nevertheless very poor in statistics of these amputations, most authors being content to pass them by with a mere mention of their occasional necessity, and their almost invariable mortality. Dr. John Ashhurst[2] gives a table of eleven cases occurring in his own practice. Of these eleven cases, two successful ones were for frost-bite of the toes, in which only a portion of the feet was removed. The remaining nine cases were for accidents, and of these only two recovered. One of these was the remarkable case of hip-joint amputation and amputation of the other leg below the knee-joint (the case, a boy fifteen years old), for a railroad crush. The same author[3] has collected a list of eight cases of *successful quadruple* amputations, but none of them appears to have been synchronous. Nine cases of *successful triple* amputations are also mentioned by him.[4] The most remarkable of these was a boy thirteen years old, for whom Dr. Koehler, of Schuylkill Haven. Pa., amputated one arm and both legs below the knee.

Besides the unique complication and the happy result in my case, I desire to note the *osteoplastic* operation performed on the right extremity. Though there was not sufficient good skin remaining to permit of an amputation at the knee-joint, it was nevertheless obviously important, for the sake of the man's life, to operate as low down as possible. As the patient was a very poor man, it was more than probable that he would have to depend upon his knee on the left side, and, as much as could be left him, on the right, for locomotion. It was therefore important to equalize the length of the thighs as much as possible. The patella presented itself as a ready expedient to add the necessary increment to the right thigh. Besides, for the proper accomplishment of this "shuffling along," it was necessary to furnish a hard, firm, non-sensitive stump. Making the anterior flap long and the posterior one short would naturally bring the line of cicatrix out of danger from pressure; it remained, then, only to have a firm, painless, bony support at the end of the stump, and the interposition of the patella seemed to fulfil all these conditions. I mentioned that it was necessary to liberate the patella on the third day, and how difficult it was to bring it again into place. Were I to do the operation again, I should cut every fibre of the tendo-quadriceps, thus obviating the torturing pull of the thigh muscles, and assure the stability of the patella.

The method is no new one. Introduced by Gritti in 1857,[1] modified by Stokes some time after, it has been done, according to Dr. Weir,[2] seventy-six times, with a death-rate of about 28.5 per cent. Strictly speaking, the osteoplastic operation which Gritti introduced at this region, was sawing off a thin slice from the articular surface of the patella, and then opposing it to the sawn condyles; but so much difficulty was experienced in keeping the bones in apposition that Stokes[3] modified the operation by dividing the femur just above the condyles, thus leaving less strain for the tendo-quadriceps femoris. It remained. however, for Szymanowski[4] to suggest and to first practise divisions of the tendon after following the Gritti method in other particulars. The operation was further modified in the case just narrated by slightly varying the form of the flap—long oval, instead of the Gritti rectangular anterior flap—but especially by simply *scraping* the articular cartilage, so that sufficient inflammatory action might be excited for the desired union instead of removing it. In this particular case it was done in order to save time, and the idea occurred to me from seeing the late Dr. James R. Wood leave the articular cartilage in his Syme's foot amputations, and having on several occasions proved the efficacy of the scraping in the Syme amputation myself. The advantages of the modified Gritti amputation were, I think, clearly illustrated in this case. Rapidity of healing, beautifully rounded stump, absolutely firm and painless point of pressure for walking or false limb.

Notwithstanding the little confidence surgeons have hitherto shown in this operation, it appears to me that, with the help of antiseptic dressings, the evident theoretical advantages of this method should be more thoroughly tested. That two raw, bony surfaces, closely and smoothly apposed, will unite more quickly than is required for the extremity of the bone to round off and become firm and painless by the conventional "button-forming process," with subsequent calcification, no one will doubt. That a stump formed by the direct union of two such bones will be better rounded and stand more pressure, is also according to reason, notwithstanding Schede's strictures to the contrary. The comparative death-rate is also greatly in favor of the Gritti operation. Dr. Weir's figures, as before stated, show a rate of about 28.5 per cent. of mortality, while the mortality of the ordinary operation at this point is above 40 per cent. There certainly appears much reason for more extended trial of this operation, and in this age of plastic surgery and non-suppurative healing, it behooves an operator to attempt every possible reparation to the unfortunate who loses a limb under his knife.

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[1] See Gross' System of Surg.

[2] See Internat. Encyclop. of Surg.

[3] Ibid. [4] Ibid.

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[1] Max Schede, in Handbuch der Allgemeinen und Speciellen Chirurgie.

[2] Med. Record, April 12, 1879.

[3] Max Schede in Handbuch der Algemeinen und Speciellen Chirurgie.

[4] Ibid.

Even Pirogoff's operation is still meeting with unqualified condemnation at many surgeons' hands. Still, the many triumphs that every well-qualified operator can show for this, and many similar, operations should stimulate us to attempt greater things in making bones repair one another.

TWO CASES OF EMPYEMA; ONE CURED SPONTANEOUSLY, THE OTHER BY INCISION.

By A. C. GIRARD, M.D.,
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Prof. McSherry's elaborate article in No. 20 of your journal induces me to add a sketch of two cases, lately under my treatment, to the literature of the subject.

M. B., a servant girl, was taken sick with symptoms of pleurisy, which shortly led to effusion into the left pleural cavity. A reasonable time having been given to the action of absorbents and blisters, aspiration was resorted to. Much to my astonishment, a pint of *pus* escaped in place of the serum I had expected. (There had been no hectic symptoms.) The pus accumulating again, the aspirator was resorted to the second time, with like result, but lesser quantity. I then determined, if the secretion continued, to operate by incision, but, fearful of possible fatal result, I again aspirated in five days, intending this to be the last effort of that character. Three days after that the patient expectorated a large quantity of pus—evidently the effusion had made its way into a bronchus. Nature did the remainder of the work. Expectorations of the same character continued in lessening quantities, and finally ceased. The patient is now well. A year has elapsed.

R. R., a teamster, was admitted to hospital with delirium tremens, from which he recovered very slowly, with a certain amount of cough. Examination of the chest revealed effusion in the left pleural cavity. Aspiration revealed it to be of a purulent character, but the pus being very thick, the tube choked up after evacuation of six ounces. Hectic fever appearing in a few days, incision of the cavity was determined on and performed under ether, a large quantity of pus welling out. A drainage-tube was introduced, and the cavity washed out with one per cent. carbolized water. This was done twice daily for four or five days. The discharge having become much lessened, and the injected water returning clear, the tube was removed, and the opening allowed to close. Every few days a slight discharge will escape from the wound, but it is lessening in quantity. The patient, whose temperature before the operation had reached 104°, is recovering rapidly, and has gained fifteen pounds, and has no more fever.

The lesson to be derived from these two cases confirms my belief in the advisability and safety of *aspiration* as soon as the active stage of pleurisy has ceased (which is my practice, and has always proved successful), and the safety of *incision* when the effusion is purulent, although in exceptional cases, as evidenced in Case I., the work will be done by nature.

Speaking of aspiration, I desire to report a unique case which came under my observation five years ago, and which I have long desired to place on record with the medical profession. It was at the time of occurrence reported in full to the Surgeon-General.

Trumpeter V. B. T., of the Second Cavalry, received a gunshot wound from a pistol in the right hypochondriac region. The shot was fired from below, and the bullet, after having passed through the liver, diaphragm, and right lung, was extracted by me through a counter-incision between the eighth and ninth rib, near the angle. He was suffering from shock and internal hemorrhage, accompanied by hiccough, and the next day complained much of distention of the abdomen, which, in place of tympanitic sound, revealed flatness in the lower half. Patient had rallied, and further internal hemorrhage apparently being arrested, the effusion remained to be dealt with. Temporizing, in my opinion, meant death to the patient from chronic peritonitis. I plunged an aspirator needle midway between umbilicus and symphysis into the cavity, and removed fifty-six ounces of fluid blood, much to the relief of the patient. To my regret, however, the swelling and hardness of the abdomen recurred in a few days, with increased area of flatness of sound, but without corresponding symptoms of continued internal hemorrhage. Effusion of bile through a lacerated bile-duct being suspected, the aspirator was again resorted to, and one hundred and twelve ounces (carefully measured) of *clear bile* removed, with great relief to the patient, and no untoward consequences. The same operation, under similar indications, and with less apprehension, was repeated three days afterwards, yielding seventy-two ounces; four days after that, ninety-four ounces, and in five days more sixty-eight ounces. After this the effusion did not reappear, presumably owing to cicatrization being completed, and patient recovered, deserted, was captured, served a term in prison, and a few days ago I saw him in robust health.

Fort Keogh, Montana Territory, July 6, 1883.

A PORRO-MÜLLER OPERATION.

By W. H. PARISH, M.D.,
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[*A paper read before the Obstetrical Society of Philadelphia, October 4, 1883.*]

Sallie Smith, a deformed dwarf, applied for admission to the Philadelphia Hospital in April, 1883. One of the Internes placed her among the pauper women of the out-wards of the almshouse. There, all the conditions surrounding the dwarf were such as to contribute to her physical deterioration. The women in that portion of the institution are unduly crowded—the ventilation is entirely inadequate, and the food of a character unfit for a pregnant woman. Her presence in those wards was unknown to any of the visiting obstetricians of the hospital until June 15, when Dr. Pauline Root, one of the Internes, ascertaining her pregnancy and her surroundings conveyed the information to me.

I at once had her transferred to the obstetric wards, where she was specially provided for and her condition carefully investigated. She was a native of Philadelphia. She was unable to give her age—although dwarfs usually appear to be older than they actually are, yet from what could be learned of her past life, from evident atheroma of her bloodvessels and from her appearance, I concluded that she must be over forty years of age. Her parents were poor, were born in Ireland, and died in this city during her early infancy. She had been told that her father died of heart disease, and her mother of insanity at the menopause. She did not know how or by whom she was cared for during her early childhood. She attributed her deformities to a fall supposed to have been received when she was a very small child. She was unable to walk until she was seven years of age. Her occupation, from the time she was first able to work, had been that of a house servant. Menstruation began at sixteen years, continued at the usual periods, but rather profusely until the beginning of pregnancy.

She could not recollect ever having been seriously ill. I learned from some of her acquaintances that for a number of years she had been of intemperate habits, repeatedly becoming intoxicated, and indulging in promiscuous sexual intercourse. Her bad habits led to exposure to inclement weather, and, with the influence of cold and damp, doubtless led to the disease of the kidneys, to which I shall again refer.

She was pregnant for the first time. The date of the last menstruation was given by her differently at different times. At one time she would give the 1st of October, at another time, the middle of October as the date when menstruation last ceased. She felt movement of the child about the middle of February, though she was also uncertain in reference to the date. The *fundus uteri* reached nearly to the ensiform cartilage, and I concluded that the full period of pregnancy would be attained about the 10th or 15th of July.

She was fifty-one inches high, the head small, mind sluggish, and memory defective; yet she was not an imbecile. The clavicles and bones of the upper extremities, though small, presented no special deformities; they did not show the usual rachitic incurvations. The right thorax was very prominent posteriorly and laterally; the left thorax markedly depressed posteriorly and laterally. Both lungs, but more especially the left one, were greatly encroached upon by the deformed thoracic walls. The heart was displaced upward and to the left, its apex being on a level with and external to the left nipple. Pulse 86, of good volume, but intermittent. Bowels moved daily; urination frequent. Urine contained one-quarter albumen, and also granular and hyaline tube-casts. The eyelids were slightly œdematous, but œdema was not recognizable in any other part of the body. The patient complained of frequently recurring frontal headache. At times things seemed darkened to her, and dark specks appeared before the eyes. She had never experienced convulsions, but occasionally had slight fainting attacks.

The vertebral column was markedly curved. The upper third of the dorsal region was slightly convex posteriorly, the lower two-thirds markedly convex posteriorly and also decidedly convex to the right. The lumbar portion was convex anteriorly and to the left. A left anterior lumbar convexity, compensating for a right posterior convexity of the dorsal region. In the erect position, the lower ribs and the crests of the ilia seemed in contact, and the left iliac crest about one inch higher than the right. Posteriorly there was a deep depression at the sacro-vertebral articulation, and the posterior-superior spines were unduly approximated. Externally examined, the sacrum, in its upper two-thirds, seemed directed nearly horizontally backwards.

External measurements with a pelvimeter showed about fifteen centimetres, or six inches, between the posterior surface of the top of the sacrum and the anterior surface of the top of the symphysis pubis. Normally this measurement is about eight inches. Deducting three inches from the external conjugate of six inches, would have made the internal or true conjugate three inches. The distance between the anterior-superior spines measured twenty-five centimetres, or about ten inches, the normal being ten and one-quarter inches. Between the normally widest portion of the crests of the ilia the distance was a little less than that between the anterior spines—that is, a little less than ten inches, the normal being eleven and one-half inches. The measurement between the crests being less than that between the spines, indicated the pelvis to be rachitic, though it will be seen that the pelvis was not the more usual, typical rachitic one. The external measurements did not indicate decided transverse narrowing of the true pelvis, though internal manual examination did show decided transverse narrowing.

Repeated internal examination showed the promontory to be jutting forward, and the anterior surface of the sacrum to be nearly straight, and directed almost horizontally backward. The symphysis pubis was correspondingly inclined downward and backward.

The oblique conjugate measured three and one-fourth inches, the depth of the symphysis pubis one and a half inches; hence, according to Lusk, deducting three-fourths of an inch from the oblique conjugate, I estimated the true conjugate to be two and a half inches. The transvere diameter of the superior strait was evidently considerably shortened, but I could not satisfactorily determine the degree of the shortening. The antero-posterior diameter of the excavation was taken to be less than the corresponding diameter of the superior strait, and all the measurements of the outlet less than the corresponding ones of the superior strait. The pelvis was diagnosed to be a generally contracted one, with proportionally greater diminution of the conjugates, and the general contraction increasing from above downward, so as to produce a somewhat funnel-shaped pelvis. The vaginal canal was narrow, the os uteri high up, and the uterine fundus markedly tilted forward. The abdomen was remarkably pendulous.

When the patient first came under our observation, pregnancy seemed to have reached about the end of the ninth lunar month, according to the most probable interpretation of the symptoms, and of the information she gave. The question arose, would it be best to produce a premature labor at the end of the ninth month, with a generally contracted pelvis, and a true conjugate of two and a half or two and three-quarter inches? I decided that should a premature labor be attempted under such circumstances, craniotomy, or some other similarly dangerous operation, would be eventually necessitated, and that the dangers of such operation would be increased by the addition of those incident to the production of premature labor. Delivery with forceps, or by podalic version, seemed out of the question. There was a choice between craniotomy, symphysiotomy, Cæsarean operation, gastroelytrotomy, and the Porro operation.

In such a pelvis, craniotomy would have been difficult and tardy, and has been shown, especially by Parry, to be attended with a mortality of mothers too large to compete with abdominal section.

I did not prefer the Cæsarean operation, because of its excessive mortality to mothers in European hospitals, and because of the six Cæsarean operations performed in hospitals in this country, all were fatal to the mothers. A condition almost essential to recovery after Cæsarean operation is rarely met with, even after normal deliveries, in hospitals. I refer to sufficient retraction of the uterus. A flabby uterus, after a Cæsarean operation, leads to blood-poisoning and to general peritonitis. The experience of many hospitals, as also *à priori* reasoning, would make the Cæsarean operation of very questionable justification in hospitals, especially in large maternities, and more decidedly still in general hospitals. The Philadelphia Hospital is not only a general hospital, but is also part of a large almshouse. Gastroelytrotomy and symphysiotomy have given good results in the hands of a few operators, the former especially in America, the latter in Europe; but both operations have been performed with comparative infrequency, and the question of their respective merits cannot be determined by the very limited number thus far performed.

I do not desire to discuss *in extenso* here the general question of the relative value of the different operations performed for the relief of advanced pregnancy in very small pelves. Among the considerations inducing me to adopt the Porro operation, with Müller's modification, were, the smaller mortality to mothers attending this operation in hospitals, and the opportunity it allows the operator of selecting daylight, and of securing the needed assistants.

The patient was placed under the influence of quinine, of Basham's mixture, and of occasional doses of the compound jalap powder. Woollen underwear and proper diet were secured for her. She was isolated from all lying-in women. Her condition did not improve, however, as the time for operation approached, but on the reverse, a persistent œdema of the face, more troublesome headache, and more marked disturbance of vision, with an increasing quantity of albumen in the urine, all pointed to steadily increasing uræmia. The time chosen for the operation was what was supposed to be the end of the thirty-eighth week of pregnancy. A large, well-lighted, well-ventilated room in the Children's Asylum, remote from the obstetric wards, and one that had for years been used as a private parlor, was selected in which to operate, and in which the patient was to remain after the operation. This room was divested of curtains, carpets, and furniture; its walls and floor were thoroughly scrubbed with carbolized water. The room was then refurnished with chair, table, and a new bed. In short, every means was resorted to to improve, as far as possible, the unfavorable conditions incident to so large an institution as the Philadelphia Almshouse.

The members of the obstetric staff had agreed with me in the diagnosis of the patient's deformities, and also as to the propriety of the performance of a Porro-Müller operation. The patient was also kindly examined prior to the operation by Drs. Albert H. Smith, Robert Harris, M. O'Hara, and Anna Broomall. After receiving a full explanation of the nature of the operation, the patient gave her entire consent. The operation was performed on June 30, 1883, with the assistance of Drs. Duer, Keating, Musser, Stryker, Montgomery, Clara Marshall, and Bernardy, all members of the obstetrical staff, and also with the assistance of Dr. McLoughlin, warden of the hospital. There were present Drs. S. D and S. W. Gross, Ellwood Wilson, J. L. Ludlow, Albert H. Smith, Anna Broomall, J. H. Brinton, Hannah Croasdale, and other physicians. On the morning of the operation the room was carbolized with the spray, but the latter was not used during the operation. All instruments were kept in a two per cent. carbolized solution, and Listerism, minus the spray over the patient, was in the different details observed. On the morning of the operation the patient received a general bath, and the bowels were moved by enema. A half hour before the operation she received two ounces of whiskey. Dr. Joseph Hearn, one of the surgeons of the hospital, and an experienced anæsthetizer, kindly administered ether during the operation. After etherization the bladder was emptied with the catheter. An incision was then made in the median line of the abdomen about seven inches in length, extending from two inches above the symphysis pubis to about one inch above the umbilicus, passing to the left of the umbilicus. The slight bleeding from the lips of the abdominal incision was controlled by artery compressors before opening into the peritoneal cavity. The absence of intestine from in front of the uterus was ascertained by percussion before making the incision. The uterus was easily raised from the abdominal cavity.

Owing to the anterior lumbar curvature, and to the length of the incision, it was impossible to completely prevent the escape of intestines. After the uterus had been turned out, a protector made of two layers of flannel, with an intervening layer of protective silk, was placed over the abdomen; the object being to avoid chilling, and to prevent the escape of blood and other fluids into the peritoneal cavity. This protector, when used, was wrung from a warm carbolized solution. The next step was to place around the cervix the wire of an écraseur, and to constrict the tissues in its grasp to such an extent as to stop all circulation of blood through the uterus without cutting through the peritoneum. This step required speed, care, and judgment. The liability of a loop of intestine or of omentum to be caught by the constricting wire had to be carefully guarded against. Immediately that sufficient constriction had been secured, a short incision was made with a pointed bistoury through the antero-uterine wall down to the placenta, for the placenta proved to be attached anteriorly. The incision was then rapidly extended, from near the neck to the fundus, with a probe-pointed bistoury, guided by two fingers of the left hand introduced into the incision. The blood pent up in the uterus by the constricting wire escaped freely, but did not enter the abdominal cavity. The incision passed to the external surface of, but not through, the placenta. The hand was immediately introduced into the uterus through the exposed membranes at the fundus, and the child quickly turned out, the placenta being in this manœuvre detached in main from the uterus. The cord was promptly tied and cut, and the child handed to Dr. Keating. It was asphyxiated when delivered, and presented a very unpromising appearance.

It, however, quickly breathed and cried under the efforts of Dr. Keating at resuscitation. The rapid resuscitation was effected by alternately dipping the child in basins of hot and of cold water. After removing the infant, the uterus, with both ovaries and both tubes, was amputated a half-inch above the constricting wire—this point was about at the internal os. It was then seen that the wire had completely controlled the circulation, and not a drop of blood escaped from the stump of the uterus.

The next step consisted in passing obliquely through the stump two steel pins five inches in length, one above, the other below, the wire. After this a strong carbolized silken cord was passed around the stump, in the line of the wire, and partly tightened. The wire was then cut and removed, and the silk cord then very firmly tightened and securely tied. Special care was given to the tightening of this cord and to the tying of a secure knot. The ends of the pins rested laterally on the abdominal walls, and under the ends, on each side, was placed a piece of sheet-lead. The stump was thus secured outside of the abdominal cavity, and rested at the lower angle of the wound. New carbolized sponges on handles were introduced into the peritoneal cavity, down into Douglas's pouch, but the entire cavity was free from blood or other fluid.

The abdominal wound was then closed by deep and superficial silver sutures. The deep ones were introduced so as to include the peritoneum. During the introduction of the deep sutures, flat carbolized sponges were introduced beneath the incision, so as to catch what oozing might occur from the needle punctures. The external portion of the uterine stump was brushed over with carbolic acid, and then invested with lint saturated with carbolized oil. A strip, two inches wide, of dry carbolized lint was placed on the incision; over this a few strips of rubber adhesive plaster were applied transversely, over these a thick layer of carbolized cotton, and over all a flannel binder. The patient was put to bed, and surrounded with pans of hot water. Dr. Montgomery took charge of the patient's general condition during the operation, and administered during its performance four hypodermic syringefuls of whiskey. He reports that the time taken up in the operation, from the beginning of the abdominal incision until its complete closure, occupied forty minutes. During the operation the pulse ranged from 100 to 128, the greater frequency being during the making of the incision in the abdominal wall, and was probably due to impeded respiration. The constriction of the cervix had no appreciable effect upon the pulse. Soon after being put to bed, the pulse was 132, but in two hours was 108 per minute, and of good volume. The respirations during the anæsthesia became disturbed and imperfect, producing considerable cyanosis, and probably causing increased frequency of the heart's action.

The patient rallied well, as was shown by return to consciousness, by bodily warmth, and a fair pulse. For about sixteen hours her condition seemed very favorable, excepting that the kidneys had ceased to act. At the end of twenty-three hours there was marked change for the worse; the mind wandering, pulse 140, temperature 100° F. An inspection of the dressing at that time, showed some oozing from the stump—perhaps six ounces—but it had then stopped. An additional ligature was placed around the stump, and one of the uterine arteries was separately ligated, the other could not be found; the stump was also brushed over with Monsel's solution. There was no subsequent oozing. That there should have been any loss of blood in this manner was a surprise to me, as the original ligature was so very firmly tightened and secured, and had for a number of hours after reaction so perfectly controlled all bleeding. There was marked atheroma of the vessels of the stump, as was revealed *post-mortem*. After the twenty-third hour the patient grew progressively worse, became uncontrollable and delirious, had convulsive manifestations, and died in coma. There was no vomiting until twenty-six hours after the operation, and it recurred only once. She experienced but slight pain, and sulphate of morphia was given in small quantity—¼ gr. hypodermically, soon after the operation; again ⅙ gr. at the end of eleven hours—and subsequently about the thirty-sixth hour, because of the great jactitation and the difficulty of keeping the patient in bed. The morphine was given hypodermically by Dr. McLoughlin in such small amount that the coma could not have been due to it. Eight hours after being put to bed the urine was drawn with the catheter. Subsequently the catheter was introduced at different intervals, but on each occasion the bladder was empty, and it was also found empty at the *post-mortem* examination. Only three ounces of urine were secreted after the operation. The patient survived forty-two hours.

Dr. John Gillespie made a careful analysis and microscopic examination of the urine secreted after the operation, with the following report:

The specimen of urine from the woman upon whom the modified Porro operation was performed was examined, with the following result:

The specific gravity was 1023; reaction decidedly acid. The urine was of a dirty, yellowish-brown color, and contained a large amount of albumen (rather more than one-third).

The amount of urea contained in the urine received by me was 10.5 gr. for the entire amount. Therefore, if only three ounces of urine were excreted in forty-two hours, the total amount of urea excreted would be about fifteen grains.

The sediment contained granular, hyaline, and epithelial casts, renal and bladder epithelium, and granular detritus and blood-corpuscles.

Dr. Wile, the acting pathologist of the hospital, conducted the *autopsy*, and I extract the following from the pathologist's records:

On opening abdominal cavity several slight adhesions were found between the visceral and parietal peritoneum in the region of the surgical incision. Bloodvessels around incision markedly congested. No exudation or other evidences of general peritonitis.

Stomach and intestines distended with gas; spleen small, atrophic.

Left kidney: Considerable displacement, found between sixth and seventh ribs. Somewhat lobular, on surface pea-sized cyst, which extends somewhat into the cortical substance of kidney. Cortex reduced, the seat of parenchymatous, solid, interstitial change.

Right kidney: Position normal; shape altered, considerable flattening on upper surface; hilus very marked; capsule adherent, seat of parenchymatous change. Both kidneys in state of contraction.

Pelvis: One ounce of bloody serum in Douglas's pouch. Peritoneal and subperitoneal tissue the seat of considerable œdema.

Veins around vagina enlarged.

Cervix uteri virginal; orifice round.

Liver enlarged; fatty,

Thorax: Left, upper, anterior, side pleura adherent.

Heart: Left side firmly contracted; right relaxed. Right auricle and ventricle seat of a firmly adherent chicken-fat clot. Left ventricle contained small amount of dark, slightly coagulated blood. Left ventricle markedly hypertrophied. Mitral valve, slight thickening. Papillary muscle considerably hypertrophied.

Lungs: Hypostatic congestion; œdematous.

. Cause of death: Heart-clot.

The bloodvessels are for the most part congested, filled with corpuscles, and surrounded by a growth of connective tissue. The uriniferous tubules are found filled with cellular and granular debris. Some contain pigment, the result of slight hemorrhages. The epithelial lining of the tubules is granular, and in some places in a state of proliferation, indicating a catarrhal process. The growth of connective tissue between the tubules and about the Malpighian bodies is more marked in some places than in others, and the interstitial process may be regarded as fairly established. A careful measurement was made by Dr. S. D. Lazarus and myself after the pelvic viscera had been removed, with the following result:

	Conjugate.
Superior strait,	3 inches.
Transverse,	4 "
Right oblique,	3¾ "
Left oblique,	4 "
Oblique conjugate,	3¼ "
Depth of symphysis,	1½ "
Obstetrical conjugate,	2¾ "
Excavation:	
Conjugate,	2¾ "
Transverse,	4 "

Upper four sacral vertebræ directed nearly horizontally backward; lower portion of sacrum and coccyx curved sharply forward.

Inferior strait:	
Conjugate,	2½ inches.
Oblique,	2¾ "
Transverse,	3½ "

Perpendicular to plane of superior strait, nearly horizontal, striking abdominal wall about midway between umbilicus and top of symphysis.

Perpendicular to plane of inferior strait would strike the upper part of the third sacral vertebra.

The death of the dwarf must be attributed chiefly to the existence of interstitial and parenchymatous nephritis. She had rallied from the shock of the operation. There was no peritonitis, excepting in the immediate vicinity of the incision.

It was too early for septic poisoning to produce death, and there were no indications that such had occurred. The loss of blood had been trifling, and death occurred too soon to be attributable to exhaustion from this cause.

The acute and almost complete suppression of urine, the symptoms after the operation, the symptoms prior to the operation, and the results of examination of the urine and of the kidneys after death, all pointed to the diseased kidneys as the cause of the fatal result to the mother.

It is well to note that union had occurred throughout the entire extent of the abdominal wound. There were adhesions between the small intestines and the parietal peritoneum along the line of incision. The latter fact is of interest, viewed in the light of death in a few instances after laparotomy being attributed to strangulation of the bowel, due to constricting inflammatory bands.

The child was of small size, and died at the end of three weeks, of inanition.

CHINESE OPIUM-SMOKING: THE DRUG USED IN THE FORM OF AN AQUEOUS EXTRACT.

MANNER IN WHICH THIS IS PREPARED AT HONG KONG UNDER THE SUPERVISION OF THE GOVERNMENT.

BY J. G. KERR, M.D.,
OF CANTON, CHINA.

[THE Chinese are said to *smoke* opium, and inhale the smoke. This will be shown to be an error, in the sense that the drug is burned, as it is used in a moist state, and the flame drawn over it, so as to produce a steam or vapor, which is drawn into the lungs, with the air inhaled through the flame. Dr. Kerr, in this paper kindly sent me, explains the whole subject of the preparation and use of the poison. We were aware that the drug was used in the smoking-dens of the consistence of molasses, and given by the dealer to the smoker on a wire, after having been heated over a lamp; but the paper here presented opens up a new subject, and shows that the Colonial Service has a monopoly in preparing the extract, and derives a large revenue therefrom.—R. P. Harris, M.D.]

The opium brought from India into China in such large quantities[1] is known by three names—Patna opium, Benares opium, and Malwa opium. The Patna comes in round balls, weighing on an average four pounds each, and one chest contains forty balls. The opium is in the form of a soft, black mass, and is enclosed in a shell made of the leaves of the poppy, of which several layers make a thickness of about one inch. The shell weighs one pound, and the opium three pounds.

The other two kinds are in lumps of irregular size and shape, weighing from four to six or eight ounces, and being more dry and solid than the other, have no external shell, but are packed in large chests with dry and broken leaves.

The opium as thus imported is not in a state suitable for smoking. It is taken through a process by which a very fine inspissated, watery extract is produced, and it is this only which is fit for smoking. A description of the process of preparing the smoking extract may be of some interest to physicians and pharmaceutists, and to others who study the opium question.

Through the kindness of J. H. Stuart Lockhart, Esq., and of Mr. Seth, of the Colonial Service, Hong Kong, I was favored with every facility for observing the "boiling" of opium as it is conducted under the supervision of the government. All the opium prepared in Hong Kong, whether for local use or for export, must be brought to this establishment—221 Praya West—weighed, and boiled under the supervision of an officer appointed for the purpose. From eighty to one hundred balls are boiled every day, and a tax of $2.25 is levied on each ball.

There are two stages in the process of preparing the extract, and two days are required.

First Stage.—The shops licensed to deal in opium send as many balls as they wish worked up with a man skilled in the business. A register is kept of the shop name, the number of balls sent, the weight, and the amount of dross or seconds to be mixed in. The balls are then cut in halves, the opium carefully taken out and deposited in copper pans. The inner layers of the shell, which are saturated with opium, are taken out, boiled separately, pressed, and the water strained. This water is poured on the opium, and more added if necessary. The pans are now placed on furnaces, over a hot charcoal fire, and boiled for three, four, or five hours. During the latter part of the time, the fire is slowed down, and constant stirring with a wooden paddle is required. When most of the water has been evaporated, and it has attained the consistency of a pill-mass, it is made into thin sheets in the following manner: The mass, being first thoroughly worked up, and made into a ball, is spread out over the bottom of the pan by pressing it with a large, round ladle. The pan is then placed, with the opium downwards, over the furnace. In two or three minutes a layer of the opium is dried, and this is peeled off with the fingers. The pan is again placed over the fire, another layer dried and separated, and this is continued until the whole of the opium is made into sheets, forty or fifty in number. Each sheet is about one-eighth of an inch in thickness, is porous and friable, crumbling to pieces between the fingers. These sheets are then placed in a copper pan, covered with water, and the first stage is completed.

Second Stage.—On the day following, the second stage begins by carefully filtering the water in which the thin sheets of opium have been steeped over night. A filter is made by arranging six or eight layers of filtering paper in a light basket. This is set over a stoneware vessel, and the water containing the opium poured into it. After a part of the water has passed through, other layers of paper are placed over the opium, and the liquor is passed several times, and finally clear water, until all the soluble parts are exhausted. What is now left on the filter is a black mass, called "nai cha," or dregs, which, when dry, is pulverulent, and is practically worthless, being sold for two or three cents a pound.

The filtrate in the jars is next transferred to copper pans, and boiled rapidly over a strong charcoal fire until a large part of the water is evaporated. The fire is then lowered, and the boiling continued with constant and careful stirring, until it has attained the appearance and consistence of treacle. It is then ready for use, and is put in earthen jars, which are enclosed in closely fitting tin boxes.

The second stage requires from four to six or seven hours, according to the skill of the operator. One ball containing three pounds of crude opium yields by the above process about two pounds of the smoking extract, and, when made without any admixture of seconds, is of deep brown color. If seconds has been added, the color is more or less black.

If the extract were prepared from the opium as it comes from the balls, it would have a uniform composition and strength, but in practice, the dregs or seconds from the pipe are mixed with the opium in greater or less proportion, according to the fancy of the dealer; and besides, numerous modes of adulteration are practised, so that it would be difficult to find in the shops two specimens agreeing in composition.

The dross or seconds is almost as valuable as the crude opium, one tael weight being worth, at the present rate, thirty cents, while crude opium is worth thirty-six cents. It is carefully collected from the pipe, and is sold in the form of a coarse powder of a dark-brown or blackish and somewhat charred appearance. It is perfectly dry, and is added during the first stage when the boiled opium is beginning to get thick. The variable proportions in which it is mixed will appear from the record of several lots brought in the morning I was there:

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[1] About 100,000 chests, containing 4,000,000 balls, are annually imported.

To 1 lot of 2 balls, weight 93.2 taels,[1] 6 taels of seconds were added.

To 1 lot of 3 balls, weight 147.6 taels, 8 taels of seconds were added.

To 1 lot of 4 balls, weight 199.4 taels, 20 taels of seconds were added.

To 1 lot of 1 ball, weight 48.4 taels, 20 taels of seconds were added.

To 1 lot of 2 balls, weight 99.7 taels, 10 taels of seconds were added.

To 1 lot of 1 ball, weight 48.9 taels, 20 taels of seconds were added.

The highest here given is twenty taels of seconds to one ball or thirty-six taels of crude opium, and the lowest two and two-thirds taels of seconds to one ball or thirty-six taels of crude opium.

It is evident from the almost universal practice of mixing seconds with the crude opium, as well as from its market value, that dealers consider that it contains a considerable quantity of the virtue of the opium. We may therefore reasonably infer that, in smoking, the alkaloids in which the virtue resides *are not destroyed by being charred.*

We will now follow the opium extract, thus prepared, as it passes through the pipe, and note the obvious changes which occur during the process of smoking. The smoker, lying on his couch or divan, with the pipe, lamp, and other implements on a tray, takes a portion of the opium-extract on the point of a wire, and warms it carefully over the flame of the lamp. He dips it again in the little jar of opium until the requisite quantity adheres, alternately warming it over the flame of the lamp, and pressing it on the flat bowl of the pipe, turning it over and over, and working it carefully on the end of the wire, until it is reduced to the state of a soft solid by the evaporation of a portion of the water contained in the semi-fluid extract. During this process, it swells up into a light porous mass from the formation of steam, and it must, therefore, be heated up to the boiling-point of water, and the presence of water prevents combustion.

When the little bolus is brought to the exact state fitted for smoking (being still a soft solid), it is worked into a ring around the wire, the point of the wire inserted into the round hole of the pipe, and by twirling the wire around while withdrawing it, the opium is deposited on the pipe and adheres to it, the hole in the ring of opium corresponding to the hole in the bowl[2] of the pipe. The stem being now applied to the lips, and the bowl held over the lamp, the flame is drawn in over the opium, converting into vapor all the volatizable material it contains. To understand what takes place, it is important to note that, preparatory to smoking, the opium has been slowly and carefully heated until steam has been formed in its substance. While in this heated state, and with water enough to prevent charring and to form more steam, the flame of the lamp is drawn over it by successive inhalations, producing the so-called smoke, and leaving a solid residue—the "in-she" or "seconds." The smoke is inhaled into the lungs, and comes in contact with the immense surface of the respiratory mucous membrane, and through it acts upon the system.

It has been denied by gentlemen who have paid some attention to the matter, that morphia and its compounds are volatilizable, and therefore that any of the alkaloids can be carried by the smoke into the system. However this may be, it is demonstrated a thousand times every day, by every whiff a Chinaman takes of his pipe, that certain constituents of the *watery extract of opium* are convertible into vapor; and the sallow complexion, stupefied visage, and wasted frames of old opium-smokers afford strong reason to infer, if they do not absolutely prove, that every whiff of the smoke or vapor conveys more or less of the alkaloids into the victim's blood.

The whole of the watery extract is, of course, soluble in water, and it is probable that the water—being rapidly converted into vapor by the flame of the lamp in the act of smoking—carries the alkaloids with it in the smoke. There is no proper combustion, and the so-called smoke is not smoke, but the watery extract converted into vapor. When all the water is exhausted from the bit of opium on the pipe, combustion might begin, but the smoker is skilled, from long practice, in withdrawing the heat at the proper time, so as to retain the value of the dregs, and thus diminish somewhat the outlay of an expensive habit.

The confused ideas which prevail as to what takes place in the act of smoking opium, and confounding it with the combustion of tobacco-smoking, have led to much misconception. Chemists need not have been puzzled about the volatilization of morphia and its compounds, had they first studied the conversion of the watery extract of opium into vapor by the process invented and practised so extensively by the Chinese, to the ruin of so many thousands of their race.

[If the reader desires to know more of the opium-habit of the Chinese, the amount of the drug smoked, its cost on the average *per capita*, the extremes of its consumption, and the curse it is to the nation, we may refer him to a review in The American Journal of the Medical Sciences for April, 1883, page 545, and particularly to a calculation made on page 550. It is impossible to estimate the amount of opium used in China, as the poppy plant is being more and more extensively grown in the empire every year, to the exclusion of cereals and other vegetable productions, and to the greater injury of the natives.]

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[1] 12 taels = 1 pound.

[2] There is not, properly, a bowl, but a flat surface with a hole in it.

A CASE OF FOREIGN BODY IN THE AIR-PASSAGES FOR TWO YEARS; SPONTANEOUS EXPULSION.

By G. GRANVILLE FAUGHT, M.D.,
OF PHILADELPHIA.

The accidental inhalation of foreign bodies into the air-passages is so frequent that the following case is added to statistical surgery only on account of its remarkable nature. I am indebted to Drs. Casselberry and Radcliffe for notes on the case.

W. C., aged 46, had been an inmate of the Germantown Hospital for a year previous to the accident. He had been admitted for necrosis of the femur, and had been operated upon shortly after his admission. In November, 1880, he was allowed to visit his own home for the afternoon, and while there, and doing, as he expressed it, "a little fixing around," according to his own account, placed *three* tacks in his mouth. He was standing upon a chair, when it slipped; he fell, and the force of the fall ejected two of the tacks from his mouth, the remaining one disappearing down his throat. His impression was that it went down his "windpipe." He continued his work, however, and did not return to the hospital until about seven P. M., when he reported the occurrence to the nurse, and handed him the two tacks he had spit out. These the nurse immediately gave to Dr. William E. Casselberry, the resident physician. They were large tacks, about five-eighths of an inch in length. The patient persisted that the remaining tack, which was like the others, had gone down his "windpipe." He complained of some pain at a point beneath the upper portion of the sternum and to the right side. There was a slight, nervous cough, which he had not previously had. Physical examination of the chest disclosed nothing unusual. Nothing could be seen in the pharynx; the patient could swallow readily and without pain. No laryngoscopic examination was made, as there were absolutely no symptoms referable to the larynx.

A consultation of the staff was called that evening, and they summoned the consulting surgeons. Dr. William Hunt responded. At both consultations it was decided to do nothing, as there was no evidence as to the position of the tack. The nurse was directed to search carefully for the tack in each of the patient's stools, and after the first day, the patient was allowed to go about as usual. At the end of forty-eight hours, the tack was found in one of his stools; it resembled the other two, and was slightly corroded. The patient also saw the tack removed from the stool, and was greatly rejoiced to be rid of it. Dr. Casselberry informs me that the nurse was a reliable man, who had occupied his position about two years, and was not likely to have practised any deception, even if such were possible. The patient complained of no further symptoms referable to the tack during the time—about one year—that he remained under Dr. C.'s observation.

During my own service of one year at the hospital, the patient was troubled at times with a slight hacking cough, principally at night, and without expectoration. Several times during the year he had a sudden and severe chill which could not be accounted for by any condition of his leg, the bone of which was still in a necrotic condition.

In October, 1882, Dr. McCluney Radcliffe succeeded me at the hospital. One evening, late in November of the same year, Dr. Radcliffe was summoned to the patient, and found that he had just had a severe chill. The following morning there was another chill, but feeling comparatively well towards evening, the man concluded to get up and sit by the open fire in the ward. While seated on the side of his bed, leaning forward, and engaged in tying his shoe, he coughed suddenly and violently, and ejected from his mouth a tack, exactly similar to the one swallowed two years previously. The tack was corroded and covered with mucus. The patient was as much astonished as the nurse and fellow-patients, and remarked that he would have been very miserable had he known that it was "there." The expulsion of the tack is beyond all question of deception. Since the occurrence, the patient has been free from all cough, and has had no repetition of the chills. Physical examination of the chest gives negative results.

142 North Fifteenth St.

HOSPITAL NOTES.

VIENNA GENERAL HOSPITAL.

Service of Prof. Neumann.

(Specially reported for The Medical News.)

MERCURIFORM AMIDE.

Mercuriform amide is the name of the remedy which Prof. Neumann is now trying upon a large scale as an anti-syphilitic. The agent was produced early in the present year in Liebreich's laboratory, but the process of its manufacture is a secret. As received in Vienna from Berlin, it is a one per cent. solution, and is without color or odor.

The remedy is exhibited hypodermically in quantities of 1 c.c. While the drug is efficacious in causing the rapid disappearance of syphilitic efflorescences, its absorbent effect upon scleroses is not comparable with that of mercurial inunctions.

Two very unpleasant effects have been noticed. *Pain* following the hypodermic injection is severe, of a peculiar character, and frequently lasts the entire day. In a number of cases abscesses and diffuse cellulitis of an alarming severity have been provoked. *Salivation* occurs more rapidly after mercuriform amide than after any other known form of mercury. Twelve hypodermic injections have been sufficient in a number of cases to seriously affect the gums. At time of writing, most cases of recent syphilis in Prof. Neumann's wards are being treated either with an ethereal solution of iodoform (one to seven), or with mercuriform amide.

MEDICAL PROGRESS.

The Action of Antiseptics Used as Dressings.—M. Gosselin has recently made some interesting experiments on this subject, which consisted in spreading on a plate of cork pierced by an opening, the transparent membranes of certain animals, on which one may see, under the microscope, the capillary circulation. He employed, generally, the transparent membranes between the toes of frogs; in three other cases the mesentery of rabbits, frogs' mesentery, and the bladder of a mouse. When the membranes were well spread out under the microscope (about two hundred powers), the movement of the blood in the capillaries was well seen, and the antiseptic substance was placed on the membrane. The experiments were made with carbolic acid solution, pure alcohol, alcohol diluted with water, and camphorated brandy. The results were as follows:

1. *With carbolic acid solutions 1-20 and 1-40*, the circulation was suddenly arrested in a few seconds after the first application, slowly began again, and then ceased suddenly after a second or third application. With a 1-40 solution it was necessary to make three applications in four or five minutes, to completely arrest the movement of the blood. On the next day the circulation had not recommenced, though the blood-vessels were clearly seen. The absence of any current was attributed to coagulation of the blood in the capillaries; at the end of the third or fourth day, the membranes were brownish, shrivelled, and in process of exfoliation, that is to say, gangrenous, and the animal died, probably from carbolic acid poisoning in the case of the frogs, and from the traumatism in the case of the case of the other animals.

2. *Carbolic acid solution of 1-60.*—The results were practically the same as with the 1-40 solution, except that the processes took place more slowly.

3. *Carbolic acid solutions of 1-80 and 1-100.*—The arrest of the circulation took place still more slowly, and was only complete at the end of about fifteen minutes. In one case, after having been arrested, the circulation was found reëstablished on the second and third days, and was again set up after having been arrested a second time.

4. *Alcohol at 86°.*—The immediate results were analogous to those with 1-20 solutions of carbolic acid, except that the arrest of circulation was not so sudden.

5. *Alcohol and water in equal parts.*—At first there was a general slowing of the current, and then, in about ten minutes, and after four applications, complete arrest in several vessels, but no arrest in others. This incomplete arrest of the circulation persisted for several days, but there was no gangrene.

6. *Camphorated brandy.*—The same results were obtained as with carbolic acid solutions of 1-60 and 1-80, and with dilute alcohol, immediate slowing of the blood-current, and complete cessation in twelve or fourteen minutes after four applications. On the second and third days the circulation was not reëstablished, but there was no gangrene. With camphorated brandy and water, in equal parts, the circulation was not arrested.

From these experiments it appears that on the application of an antiseptic, the circulation is arrested in the capillaries by the more or less rapid coagulation of the blood. It is more quickly arrested when the antiseptic is strong. In one case the circulation was restored on the day after its arrest. M. Gosselin attributes this arrest to the coagulation of the blood, caused by contact with the antiseptic substance which had penetrated the thin membranes and capillary walls.—*Gaz. Hebdom.*, No. 36, 1883.

THE PRODUCTION OF ANÆSTHESIA IN ORGANIC AFFECTIONS OF THE ENCEPHALON.—In a series of communications to the Academie de Médecine, M. BROWN-SÉQUARD attempts to show that anæsthesia, paralysis, and amaurosis produced by an organic affection of one of the various parts of the encephalon, depend generally, if not always, upon other causes than have been assigned to them, that is to say, a loss of function of the part destroyed. Numerous experiments on dogs, rabbits, and Guinea-pigs show that anæsthesia due to an organic lesion of the brain may disappear suddenly, or very rapidly. He then gives a series of arguments, the outcome of several thousand clinical observations made during the past thirty years.

1. All parts of the encephalon may produce anæsthesia. This explains how localists, committing the fault of thinking that a function which disappears necessarily appertains to the organ found injured, have advanced the opinion that the centre of perception of sensitive impressions, locate anæsthesia in the cerebellum, the optic tract, the posterior lobe, in certain convolutions, etc. Facts authorize us in placing that centre in the so-called motor region of the base of the brain, or of the internal capsule, in one or the other of the corpora striata, in all parts of the anterior lobes, middle or sphenoidal, etc., since lesions localized in one of these regions have sometimes produced anæsthesia.

2. Each portion of one-half of the encephalon may be destroyed without causing anæsthesia. The lesion itself may be quite considerable without causing symptomatic evidence of it. Richet has published a case of destruction of the middle lobe and a large portion of the posterior, without the production of anæsthesia. Abercrombie, Rostan, Porta, and other observers have found that a hemisphere may be almost entirely destroyed without causing anæsthesia.

3. Of the similar parts of the two sides of the encephalon, there are comprised those which are supposed to serve for the perception of sensitive impressions, and which may be destroyed without giving rise to evident anæsthesia.

4. Instead of producing anæsthesia, destructive lesions of parts, which are believed to be centres and conductors of sensation, sometimes give rise to hyperæsthesia.

5. In more than one hundred cases, lesions of the most different parts of the encephalon have given rise to anæsthesia on the injured side, the side upon which it should not have appeared.

6. A considerable destructive lesion of the parts considered as centres or conductors of sensitive impressions, instead of producing anæsthesia of the two limbs of the opposite side, has sometimes only produced it in the arm or the leg.

7. In certain cases of encephalic lesion, anæsthesia, instead of being total, is only present as regards certain characters of sensitive impressions (tactile, painful, thermal).

8. Anæsthesia may be produced only on one side of the body when the lesion reaches the same depth of the two similar parts at the base of the brain on the two sides.

9. Experiments on animals (and in harmony with very many clinical facts) show that transverse section of a lateral half of the base of the brain, from the bulb to the internal capsule, inclusive, give very varied results as to the production of anæsthesia. While, in every case, the experimenter may cut the entire mass of fibres believed to be conductors of sensitive impressions coming from opposite sides of the body, he finds, on the one hand, that each of the portions may be cut without causing evident or persistent anæsthesia; and on the other, that certain portions, especially the internal capsule, determine anæsthesia much more oftener than others.

If, in the face of these facts, one persists in considering anæsthesia of organic encephalic cause as demonstrating that the injured part is the conductor of or the centre for the perception of sensitive impressions coming from one-half of the body, he is necessarily reduced to upholding one of two absurdities—first, that each part of the encephalon is the only path for the transmission or centre for the perception of sensitive impressions; or, second, that no part of the encephalon is a conductor or perceptive centre of sensitive impressions.—*Gazette Méd. de Paris*, No. 27, 1883.

Aphthous Vulvitis of Children.—**Sarazin**, *Thèse de Paris*, July, 1883, gives the following conclusions regarding this affection. 1. Aphthous vulvitis is a well-characterized disease. It is peculiar to little girls from two to five years of age. Rare in private practice; it is observed especially in hospitals.

2. Measles is the principal cause of this affection. It furnishes two-thirds of the cases.

3. Gangrene of the vulva has most frequently for its point of departure aphthous vulvitis.

4. The prognosis, which was unfavorable before the employment of the iodoform treatment, has become quite favorable since the introduction of this agent as a topical application.

5. The treatment consists in sprinkling the affected parts with iodoform powder, and keeping them separated with pledgets of lint. The internal administration of tonics is a useful adjuvant of local treatment.—*Journal of Cutaneous and Venereal Diseases*, October, 1883.

Extravasations of Blood into the Labyrinth Produced by Quinine and Salicylic Acid.—Experiments made by **Kirchner**, of Würzburg, on animals have demonstrated to him that the auditory troubles supervening on the ingestion of large doses of quinine and salicylic acid are produced by extravasations of blood into the various parts of the ear.

The functional disturbances are especially grave when the exudation is into the labyrinth; in the middle ear less marked and later symptoms are produced, and the prognosis is always more favorable.

Beside the anatomical lesions of the mucous membrane of the tympanum—red color and slight reddish-yellow exudation with considerable engorgement of the vessels—Kirchner has observed hyperæmia and hemorrhage into the labyrinth in the animals upon which he experimented. In the brain and on the internal face of the skull there was considerable engorgement, notably at the level of the temporal bone; the vessels of the dura and pia mater were markedly engorged. The nervous substance presented no important modifications.

With the microscope, one can see, in the case of animals subjected to these experiments, a marked vascular injection with hemorrhagic extravasations, both into the cochlea and the semicircular canals. The small nerve-filaments subjacent to the fibres of the canal, appear, under these circumstances, to undergo equally profound alterations in their structure and function.

Kirchner gives the history of a case of deafness and cephalalgia, caused by salicylic acid, with vertigo and difficulty of walking straight. Paracentesis and frequent injections of air caused these symptoms to disappear rapidly, with the exception of a slight deafness on one side.—*Annales des Mal. de l'Oreille, du Larynx, etc.*, No. 4, 1883.

Hypogastric Cystotomy as a Substitute for the Perineal Operations.—**Prof. L. Villeneuve**, in an article on this subject, draws the following conclusions:

1. The hypogastric operation, which hitherto has been used only exceptionally, appears to be coming into more general, though not exclusive, use for the performance of cystotomy.

2. It should be performed with the newly perfected instruments made for it; ballonnement (ballooning the rectum by means of an air-ball), vesical injection, pushing back the peritoneal cul-de-sac, connected siphon-tubes, and antiseptic precautions and dressings.

3. Suture of the bladder should be discarded, but immediate union should always be attempted, which, if realized, shows the great superiority of the hypogastric operation.

4. The hypogastric operation is one of necessity in cases of large and encysted stones, intolerant bladder, and impermeable or strictured urethra or vagina.

5. Especially is the operation to be recommended in old persons and adult men, and in those in which lithotrity is not applicable, and which up to the present time have only been treated by the different perineal operations.

6. In male infants, it may be presumed that it is at least equally as good as the perineal operations. But the happy results obtained by these operations for a long time, render the indications of the high operation in these cases less pressing.

7. In female children, and females at the age of puberty, the hypogastric operation is the method of choice.

8. In married women the question of choice between the hypogastric and vaginal operations is undecided.

9. An inflammatory affection of the uterus, marked deformity of the bladder on account of deformity of the uterus, and notably cystocele, should lead one to adopt the high operation. In adult females the hypogastric operation should be preceded by dilatation of the urethra.

10. Constitutional and diathetic affections have no special indications in selecting the method of operation. The same holds good for lesions of various branches of the sympathetic plexus.—*Revue de Chirurgie*, No. 9, 1883.

Carbolized Sawdust in Antiseptic Surgery.—**Mr. H. P. Symonds**, Surgeon to the Radcliffe Infirmary, advocates the use of this material as a dressing for wounds. He says: One of the drawbacks of the usual antiseptic dressing is the rapidity with which the discharges come through on the first day or two after operation, often necessitating the redressing of the case within a few hours. To prevent this, and yet not to interfere with the aseptic condition of the wound, is a distinct advantage both to the patient and the surgeon. The material I have used recently in a considerable number of cases is coarse sawdust, soaked in (1 in 10) solution of absolute phenol and spirit of wine, then allowed to dry slightly so that the spirit may evaporate, leaving the sawdust charged with carbolic acid. When used it is enclosed in a bag made of several layers of gauze, and applied outside the deep dressing, the usual external dressing being put over it. The sawdust thus takes the place of the padding of loose gauze which is generally used. Its absorbent power is very great, and it has the additional advantage of keeping up an equable pressure on the divided tissues. I find that fourteen ounces of sawdust will readily absorb about one pint of fluid.

He reports five cases, two of amputation, two of operation for tumor of the mammary glands, and one of compound dislocation of the elbow, in which it was used. In all these cases primary union took place without any formation of pus. In only one did the temperature reach 100°, and that on the day after operation, after which it became normal. I have not quoted these cases as being at all remarkable, but merely as common instances in antiseptic surgical practice in which the sawdust dressing was used. Surgeon-Major Porter, in *The Surgeon's Pocket-book*, states that he has used sawdust as a dressing in suppurating offensive wounds; but I am not aware that it has been tried, when prepared in the way I have described, in antiseptic dressing. The three points in its favor are its powerful antiseptic qualities when saturated with carbolic acid, its great absorbent power, and its adaptability to any surface. I may add that the sawdust should be coarse, as I find that if it is very fine it passes through the gauze and irritates the skin.—*Lancet*, September 22, 1883.

EFFECT OF METALLIC POISONS ON THE SPINAL CORD.—The affections of the nervous system produced by contamination with certain metals, as lead and mercury, have been studied more extensively clinically than pathologically, and even yet it may be held to be undetermined whether the action of the poison is upon the peripheral or the central apparatus. Dr. Popow has recently put on record the results of an anatomical investigation upon animals (chiefly dogs) poisoned by arsenic, lead, and mercury respectively (Virchow's *Archiv*, 93, Heft 2), and in most cases he was careful to administer the poisons in varying quantities, so as to contrast the effects of acute and chronic poisoning. The general result of his inquiry goes to show that marked changes of a inflammatory character occur in the spinal cord, both in the gray and white matter, under all these conditions. In acute arsenical poisoning the spinal cord was softened, the gray matter especially being reddened and swollen; there was proliferation of the nuclei of the bloodvessels, and an exudation of a peculiar hyaloid substance. The nerve-cells were swollen, their processes dwindled, and their protoplasm granular or vacuolated, whilst in the white columns the axis-cylinders showed irregular thickenings. In chronic poisoning it was difficult to discriminate between the two portions of the cord, the divided surface having a yellowish-red color throughout; the walls of the vessels were thickened, and hyaline masses abounded; the nerve-cells vacuolated, or shrunken and pigmented; whilst free pigment masses, representing traces of hemorrhage, occurred throughout the sections. In other words, there is, in poisoning by arsenic, a central myelitis at first, and later a diffuse myelitis. Very similar changes were found in the spinal cord after poisoning by lead—namely, exudation from bloodvessels; a general affection of the nerve-cells, beginning as cloudy swelling, and passing into atrophy and pigmentation; and inflammatory swelling of the axis-cylinders. In mercurial poisoning, the early changes consist of hyperæmia of membranes and of the cord, followed by hemorrhages, inflammatory exudation, and changes in the nerve-substance hardly differing from those seen in the other two cases. In each instance the peripheral nerves and the nerve-roots showed no alteration, so that the conclusion is that the paralysis, spasms, etc., characteristic of the toxic effects of these metals, depend upon a central rather than a peripheral disturbance, all the degenerative changes described as occurring in nerves and muscles being strictly deuteropathic.—*Lancet*, September 22, 1883.

INDICATIONS FOR TRACHEOTOMY IN LARYNGEAL TUBERCULOSIS.—Although not often indicated in laryngeal tuberculosis, there are cases in which tracheotomy is necessary. This occurs when attacks of suffocation come on with violent orthopnœa. The situation of the patient is desperate, and the operation must be performed without hesitation. These cases are especially seen in acute phthisis, with caries of the arytenoid cartilages. Besides these cases, the operation may also be performed in chronic phthisis, when the laryngoscope, enabling us to judge of the progress of the lesion, will show the precise time for operating.

It is also observed that in certain circumstances there is alteration of the cricoid and thyroid cartilages; but it is only in cases in which there is caries *en masse* of these cartilages that attacks of suffocation come on. The above-mentioned lesions may be diagnosticated by increase in the size of the larynx, by fistulæ, and by direct examination, which warn the physician to be prepared for any emergency. The operation may prolong life for some time, for observation shows that these grave disorders may be only accompanied by slight pulmonary lesions. In other cases, phthisis produces lesions of the mucous membrane which are indications for tracheotomy. M. GOUGENHEIM has seen cases of true tumors, analogous to cancer, which, limited at first, invade the whole larynx with a fatal result. He reminds us that infiltration of the aryteno-epiglottic folds, called œdema glottidis, is often seen in cachectic and non-dyspnœic diseases, and does not require the operation.

Finally, lesions of the vocal chords are often indications for the operation; sometimes they are tumefied, but mobile, and the danger arises from progressive sclerosis of the glottis; at other times, they are less tumefied, but immovable and near together, the immobilization being due to nervous action (paralysis or contracture). The patients are then in a state which Sestier and Trousseau attribute to œdema of the glottis. Gougenheim has observed compression of the recurrent nerves in a case of this kind. Tracheotomy is obligatory, but here pulmonary lesions are certain, and the patients live but a short time.—*Gaz. Méd. de Paris*, No. 35, 1883.

THE CENTRE OF LANGUAGE.—PROFESSOR RÜDINGER, in a recent contribution to the anatomy of the centre of language, is of the opinion that if the centre of language is in the third frontal convolution, one should find anatomical differences according to the degree of the intelligence of the different living beings. Rüdinger has worked up the matter quite thoroughly in cases of diversely intelligent men, microcephalics, deaf-mutes, and apes of various kinds. In the orang-outang and chimpanzee this convolution is at the surface of the brain, but in the gorilla at the bottom of the fissure of Sylvius. In cases of microcephalic infants who could not talk, this convolution was rudimentary. In a Hottentot it was very small and very short, and was but little developed in a negro's brain.

A comparison of this convolution in the brains of men and women showed great individual differences. The volume of the convolution, and the number of folds and sulci are certainly augmented in proportion to the degree of intellectual activity. In the case of an advocate, distinguished as an orator, Rüdinger found that the third frontal convolution of the left side measured twenty-three centimetres, while that of the right measured only sixteen. There was an equally remarkable difference in the case of the German philosopher Huber. In the case of Buhl, celebrated for his works in pathological anatomy, the third *right* frontal convolution was much larger; a fine performer on the violincello, he naturally used his left hand a great deal in touching the strings.

In all the men of inferior culture, the symmetry is reëstablished between the two convolutions. In deaf-mutes, the third left frontal convolution was *always* small, while on the right side it was as large or a little larger. The fact established by these researches, says Rüdinger, is that apes and microcephalics have only a rudiment of the third left frontal convolution; that in deaf-mutes this convolution, though not rudimentary, is very simple; and that in orators it presents an extraordinary development. The hypothesis, then, that the faculty of language is situated in the lateral part of the frontal lobe is more than probable.—*L'Encéphale*, No. 3, 1883.

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IS EXTIRPATION OF THE CARCINOMATOUS RECTUM A JUSTIFIABLE OPERATION?

In the third part of vol. xxix., 1883, of the *Archiv für klinische Chirurgie*, will be found a report from the pen of his assistant, Dr. Heuck, of the experience of Professor Czerny, of Heidelberg, in regard to the operative treatment of carcinoma of the rectum, from which we glean many interesting facts that will be utilized, in common with the statistics furnished by other operators, in our effort to solve the query which constitutes the title of this article. In the issue of The Medical News of September 22, we briefly indicated that extirpation of the thyroid gland for malignant growths was attended with a mortality of 57 per cent., and in the subsequent number we expressed the opinion that the vaginal extirpation of the uterus for carcinoma was an operation full of promise. As the entire subject of the removal of the various organs for carcinoma is one of very great practical interest, our readers may look for an additional article in the near future on resection of the cancerous pylorus.

The experience of Czerny relates to 25 extirpations of the rectum, of which 1 died of septic peritonitis. In 15, or 60 per cent., there was recurrence, which took place, on an average, in a little more than eleven months. Of the 9 patients who remained free from a return of the disease, 2 were living more than four years after the operation, 1 was living at the end of three years and eight months, 1 was alive at the expiration of two years and a half, 2 were well at the end of two years, 1 was alive at the conclusion of one year, and 2 were alive at the end of six months. In 1 of the cases the disease had existed before removal for four years; in 3 for three years; in 3 for two years; and in 2 for less than a twelvemonth. These facts are remarkable, since they show that a carcinomatous rectum of long standing may be extirpated with a very fair prospect for final relief.

The death-rate of the operation appears to be improving with increased experience. Thus, Billroth, up to 1876, had lost 19, or 42.2 per cent., of his 45 cases; and Rose, up to 1877, had lost 8, or 50 per cent., of his 16 cases. Kocher, on the other hand, up to 1879, had lost only 2, or 20 per cent., of his 10 cases; while, as we have just pointed out, Czerny, up to 1882, had lost only 1, or 4 per cent., of his 25 cases. The success of the Heidelberg surgeon will be seen to be the more astonishing when we inform our readers that, in consequence of the high position of the neoplasm, he opened the peritoneum in 11, or 44 per cent., of his cases. In 6 the wound was closed with sutures, and it was left open in 5, the fatal case coming under the latter category.

The average duration of life in carcinoma of the rectum has been ascertained to be two years. Hence, with the results of Czerny to guide us, we are justified in concluding that the six cases which were living free from recurrence for periods varying from two to four years probably represent permanent recoveries. Lest this number may be deemed too limited to represent the actual state of facts, we have to add to the cases of Czerny 198 additional ones of which we have a record. Of the entire number, or 223, 180 recovered, and 43, or 19.3 per cent., died. Of 142 in which the final result is known, 64 remained well for periods varying from two months to ten years, and 78, or 54.9 per cent., recurred. Omitting the cases in which the recovery at the date of the last report had lasted only from two to sixteen months, we have 35 cases in which there was no reproduction of the disease for two years and upwards, 13, indeed, having remained well for between five and ten years, so that 15.7 per cent. of the entire 223 were in all probability permanent cures. If three years and upwards be regarded as still better representing a probable immunity from recurrence, the 28 cases which come under this category show 12.5 per cent. of cures; while the 21 cases which represent four years and upwards make the number of cures 9.4 per cent. With these results before us, and they are far better than have as yet been secured for carcinoma of other organs, we have no hesitation in answering our self-imposed question in the affirmative.

In conclusion, we may add a word in regard to the operation, as the surgeon may be tempted to save a strip of apparently sound mucous membrane or a piece of the sphincter, but the experience of Czerny is condemnatory of this practice. Thus, in 8 cases in which all the tissues were removed, recurrence was witnessed in only 3; while in 8 others in which portions of the mucous membrane or the margin of the anus were left, recurrence occurred in 6. In addition to these pregnant facts, Czerny teaches, and Billroth agrees with him, that, by trying to save too much, the discharge of the secretions is interfered with, and the dangers of septic infection are greatly increased.

CALCULOUS DISEASE OF THE PANCREATIC DUCT.

The subject of calculous disease of the pancreatic duct has always been shrouded in a good deal of darkness, partly because the isolated instances of it have occurred at such long intervals, and the published accounts of them have been so scattered throughout medical literature that it has been impossible for any one to compare them. In The American Journal of the Medical Sciences, however, for October, will be found a most valuable paper on this subject by Dr. George Woodruff Johnston, in which have been collected, probably without exception, all the published cases of this disease. The paper is part of an inaugural thesis, written by Dr. Johnston for the doctorate in the University of Pennsylvania. It bears the stamp of painstaking and laborious research, and is worthy of careful perusal.

There are three modes in which calcareous concretions are found in the ducts of the pancreas. 1. As free concretions. 2. As calculous incrustations of the duct-walls. 3. As "acne pancreatica." Of these the first include by far the greatest number. By "acne pancreatica" is meant a condition so named by Klebs, in which the normal pancreatic secretion is converted into a thick chalky pap. Of this the instances are few. The free concretions are found anywhere in the pancreatic duct or its branches, or in both.

The chief cause of pancreatic calculi is some obstruction to the free outflow of the pancreatic secretion which favors the accumulation of the pancreatic juice and subsequent precipitation of its inorganic constituents. But cases have been reported of calculous disease of the pancreas where no obstruction of the ducts was present, showing that some other influence than obstruction must be at work to produce such a change in the composition of the pancreatic fluid as to cause a precipitation of inorganic matters and the formation of calculi.

That a change in the normal composition of the fluid must take place, is evident from a comparison of the composition of the calculi with that of the fluid. The former contain large proportions of lime salts—phosphates and carbonates usually—where analyses have been made, about ninety per cent., whereas the pancreatic fluid contains but traces of lime. The same difference, although in less degree, exists between the composition of salivary calculi and the salivary secretion. The causes of these changes in composition of the pancreatic and salivary fluids which result in such precipitation, says Dr. Johnston, "must still remain a matter of doubt." He says it is possible that physiological variations which are occasionally present, may become sufficiently permanent to permit the precipitation to occur; or that local changes in the secreting tissue of the pancreas or its ducts, may produce such an influence upon the secretion as would lead to the crystallizing out of its less soluble salts. But he has shown us that the composition of the resulting calculi is different from that of the fluid, that the salts indeed which make them up are scarcely represented in the normal composition of the fluid. So that there must result, first, a fluid which differs in composition from true pancreatic fluid. We think it much more likely that his second alternative, that local changes in the secreting tissue of the pancreas are at the bottom of these changes in the composition of the fluid, is the correct one. And we think it likely that these changes are the result of inflammation. Everywhere do we see that inflammatory new formations present a tendency to calcareous infiltration; and we know well that obstructed secretion everywhere gives rise to a certain degree of inflammation. Hence it is not unlikely that in the cases in which the calculous formation is an incrustation of the duct walls, it results directly from the calcareous infiltration of the inflammatory product itself, or of the tissue permeated by it, just as do the calcareous plates in a chronic endarteritis. Such inflammations, also, may be expected to change entirely the composition of an otherwise normal secretion. In this way, too, may be best accounted for those calculous formations which occur without obstruction in the pancreatic ducts. They are the result of inflammatory processes excited by other causes than obstruction.

Of some practical importance in connection with this subject is the question whether pancreatic calculi are ever discharged into the duodenum with the symptoms which attend the passage of biliary calculi—pain, colic, and jaundice. This cannot be denied, as it is evident that the same symptoms must accompany such discharge. On the other hand, since the symptoms would be identical, it would be impossible to decide between the two, except on the ground of the much greater frequency of hepatic colic. Should, however, such symptoms be associated with an evident tumor to the left of the umbilicus, suspicion of pancreatic calculus would be justified. But we do not know that the treatment would be different if the diagnosis could be made. In one case perforation of a pancreatic calculus caused fatal peritonitis.

The presence of pancreatic calculi must, of course, give rise to secondary results, among which dilatation and the formation of cysts and inflammation are the most likely. The degree of the former may be anything between that of a goose-quill and that of a child's head, and the latter may result in enlargement, atrophy, or suppuration. All of these alterations may give rise to physical conditions which may demand rare skill in their diagnosis from other abdominal affections.

The interesting question as to the relation of pancreatic disease to mellituria is referred to by Dr. Johnston without, however, adding to our knowledge of the subject. In four of the cases of pancreatic calculous disease, diabetes was supposed to be the cause of death, Dr. Johnston is inclined to ascribe the phenomenon of glycosuria to secondary changes in the cœliac ganglion produced by the presence of a pancreas made large and hard by the presence of calculi; while atrophy of the pancreas will follow changes in the cœliac plexus, as atrophy of the submaxillary gland will follow section of the vaso-motor nerves supplying it. But that there is something more than the effect of pressure of an enlarged pancreas which produces the glycosuria in cases of diseased pancreas, we think is evident from a case of our own—a case of most obstinate diabetes, attended with fatty diarrhœa, and terminating fatally—in which the autopsy revealed calculous plates in the duct walls, but no marked enlargement—at any rate, none sufficient to produce pressure upon the cœliac plexus. In such a case as this, however, there might still be a reflex influence from the pancreas to the cœliac ganglion which would cause the glycosuria.

Notwithstanding the supposed frequent association of pancreatic disease with fatty stools, but three of the cases collected by Dr. Johnston exhibited this symptom. Of these, in two there was also fat in the urine, the quantity in one instance being so great that it made its appearance one month before it was detected in the stools, and in such quantity as to float, when cool, in greasy flakes upon the surface. We can scarce conceive such a condition as this without supposing some communication between the intestinal canal and the urinary passages.

The profession is much indebted to Dr. Johnston for his paper. We hope it will so direct attention to the subject that further accurate knowledge will grow out of it, and that not only more accurate diagnoses will become possible, but some therapeutic measures may also be evolved.

PORRO-CÆSAREAN SECTION.

In another column we present the record of the fifth Porro operation performed in this country. The prognosis in this case was necessarily unfavorable. The age of the woman, her life of poverty and intemperance, the condition of her arteries, and, above all, the presumed change in her kidneys, made the risk in operating upon her unusually great.

Of 116 Porro and Porro-Müller cases, tabulated by Dr. R. P. Harris, in The American Journal of the Medical Sciences for October, 1883, where the pedicle was dressed externally; operated upon in Italy, Austria, Germany, France, Belgium, Switzerland, Great Britain, Russia, Holland, Spain, and the United States, this one stands alone in regard to the kidney complication, and its effect as a factor in leading to a fatal issue. But for this, the case would have compared favorably with many which have recovered in European hospitals. The fact that the patient died comatose; that her kidneys secreted but +℥iij of urine in forty-two hours, and that these organs presented evidences of disease to the eye and under the microscope after her death, shows the extra risk in the operation performed upon her. The subsequent death of the fœtus was no doubt due to its imperfect nutrition in utero, to its being somewhat premature, and to the unhealthy state of the mother. Where the mother has been healthy, and her own and her child's life saved under abdominal delivery in this country, the life of the latter has usually been prolonged, and even in cases where the mother was lost, the child has been saved to grow to maturity. Several of the subjects of Cæsarean delivery have reached advanced life in the United States, the oldest known being sixty-eight and seventy-four years respectively. Several of the children have been heads of families, and one in this city is now forty-eight years old, and has given birth to eight children.

The Porro operation thus far in the United States presents from its results no special advantage over the Cæsarean section (old style); but the results in European hospital practice show very decided advantages in a largely lessened mortality. In the United States, no hospital Cæsarean case has resulted in saving the mother. the record standing six operations and six deaths. The Porro-Müller operation of Dr. Parish is the first of its kind in an American hospital, and not by any means a test case. In all obstetrical cases in our maternities requiring abdominal delivery, we believe the result obtained with the Porro operation in the old Santa Caterina Hospital, of Milan, of saving 75 per cent. should be taken as an example against our universal death-rate in such institutions with the old method; and the operation of Porro should be put to the test where the disadvantages incident to delivery in hospital as compared with the advantages in private practice are to be overcome.

THE BRAIN TRANSFIXED BY A RAMROD, WITH RECOVERY.

It has long been known that the integrity of the cerebral hemispheres is not essential to the continuance of life, and that they may undergo considerable morbid change or mechanical injury, accompanied by extensive loss of substance, without fatal result, or even serious impairment of the vital functions.

Bearing upon this point, Fischer reports, in the *Deutsche Zeitschrift für Chirurgie* (Bd. xviii.), an interesting case of an accident which occurred during the unloading of a carbine, by which the brain was transfixed by a ramrod, without fatal result. The ramrod, which was of iron, entered the thorax to the right of the fourth dorsal vertebra, passed upwards in the deeper tissues of the right side of the neck through the base of the skull and brain, and projected to the extent of thirty centimetres out of the left side of the head. After an opening had been made into the neck, the rod was driven backward through the skull, by the strokes of a hammer, and taken out at the neck. The patient recovered, except that he remained blind in the right eye.

An effort to imitate the injury on the dead body showed that in the neck no important vessel or nerve was injured, that the instrument entered the cavity of the skull through the right optic foramen, tore the optic nerve, and then entered the space between the two frontal lobes, and penetrated the brain only to the slight extent of three centimetres, and wounded only the anterior edge of the left superior frontal convolution.

This case is similar to that reported by Bigelow in The American Journal of the Medical Sciences for July, 1850, in which a pointed iron crowbar was driven through a man's head by the premature explosion of a blast. The bar entered the left side of the face, near the angle of the jaw, and passed obliquely upward inside the zygomatic arch and through the anterior part of the cranial cavity, emerging through the frontal bone in the median line, in front of the union of the coronal and sagittal sutures. This patient became delirious and comatose, but subsequently also recovered, although with loss of vision in the eye of the injured side, and lived for twelve years.

THE RÔLE OF HYDROCHLORIC ACID IN GASTRIC DIGESTION.

The office of free hydrochloric acid in stomach digestion has been the subject of investigation lately by an ingenious method. By means of Kussmaul's pump, the contents of the stomach are withdrawn at any stage of digestion for the purpose of study. A new reaction for the acid now enables the operator to distinguish with some precision hydrochloric from any organic acid. By the application of this method, it has been ascertained that hydrochloric acid disappears from the stomach-juice in typhus and typhoid fevers, to reappear again when convalescence is established. In carcinoma, the absence of free hydrochloric acid has been demonstrated. This fact is not explained by the condition of feebleness, but is clearly due to the cachexia. Hence, if in a case of extreme weakness due to stomach-disease, free acid is present in the stomach juice, the case is not one of cancer. The disappearance of the acid cannot be referred to the chemical action of the cancer-juice, since the acid is wanting when there is no ulceration. In this way Van Velden diagnosticated cancer, and the autopsy confirmed his opinion. In another case, the symptoms of a neoplasm being present, cancer was excluded because of the presence of free acid in the stomach-contents.

In another series of researches, Van Velden has shown that saliva mixed with the aliment entering the stomach, does not act on starch when there is no free hydrochloric acid. There are, hence, two phases or periods of the stomach digestion: the first, when the action of the saliva still continues to be manifest; the other coincides with the presence of free hydrochloric acid. It is in the course of the latter that peptones are produced in quantity.

These observations have not gone unquestioned. Ewald maintains that the reactions relied on by Van Velden are vitiated by the presence of albuminates, blood, etc.; that in many cases of carcinoma the reaction of hydrochloric acid still occurs; and that the two periods of stomach digestion do not really exist. Van Velden in reply, however, reaffirms his original positions. The questions thus raised must therefore be regarded as still *sub judice*, but they offer an interesting subject for further inquiry.

CONTINUED FEVER AT ASBURY PARK AND OCEAN GROVE.

A few cases of continued fever and two recent deaths seem to show that Asbury Park and Ocean Grove have but just escaped a typhoid epidemic. The facts, however, are creditable to the health authorities. The trouble arose with those householders who would not connect with sewers, or who had, before the sickness, been notified as maintaining nuisances. In one case, a well was only eighteen inches from a boarding-house water-closet. The examination of the water showed the false security of a driven well when located near surface nuisance. Two cases have occurred in which driven wells have become saltish. In both cases the next neighbor kept an ice-cream saloon, and threw the freezing mixture on the ground. The other case of death occurred where the rear wall of the hotel formed the wall of the privy, the contents of which had leaked into the cellar so as to become ponded.

Engineer Owen, of New York City, has just made an elaborate report of a plan for the sewerage of Orange City. It contemplates the filtering, precipitating, and utilization of the sewage.

REVIEWS.

De L'Excision du Goître Parenchymateux. Par Le docteur Paul Liebrecht, Assistant d l'Universite de Liége. (Ext. du Bul. de l'Acad. r. de Médecine de Belgique, 3e Sér., t. xvii. No. 3.) 8vo. pp. 270. Bruxelles: H. Manceaux, 1883.

Excision of Parenchymatous Goitre. By Dr. Paul Liebrecht, etc.

This work contains, besides a review of the history of the subject and a careful description of the method of operating, a detailed account of 322 operations for the excision of goitre, with a careful analysis of them, and the conclusions to which this analysis has led the author. These conclusions are altogether favorable to the more frequent adoption of the operation than has heretofore been generally deemed advisable. They also indicate the author's preference for total as compared with partial excision, and for the method called antiseptic, *without* the spray. The facts cited by Dr. Liebrecht seem to confirm his opinion that the dangers of thyroïdectomy have heretofore been much overrated. For, when we come to look over his analysis we find that primary hemorrhage was the cause of death in only 7 out of 356 operations, and secondary hemorrhage in only 4—which scarcely warrants the common dread of these accidents. So when we examine to discover the effects of accidental injury to the inferior laryngeal nerve—another of the terrors of the operation—we find that these effects have been surprisingly harmless and transitory. So that it would appear that the author is right in claiming for excision of the diseased thyroid gland, a position in surgical practice equal to that of the removal of other tumors of the neck. It is interesting to observe that his statistics show a progressive diminution in the death-rate from year to year, an indication that the objections to this operation, however well founded, are only such as may be overcome by skill and care. This being the case, it is not unlikely that even the moderate death ratio of the present day—the author would make it only about 8¾ per cent. from inevitable causes—may be reduced yet more, and the operation meet with the general adoption which he urges. But, however this may be, he deserves great praise for the diligence and care with which he has gathered together and recorded the evidence upon which his own opinions rest, and upon which any one else may build, if he will, an opinion of his own.

SOCIETY PROCEEDINGS.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Thursday, October 4, 1883.

The President, R. A. Cleemann, M.D., in the Chair.

Dr. W. H. Parish reported a

PORRO-MULLER OPERATION,

and exhibited the uterus, the abdominal incision (which had united), and surrounding wall, the stump of the cervix in position at the lower angle of the wound, the entire external genitals and mons, including the vagina and bladder. The ureters were found entirely free. (For a full report of this case, see page 398.)

Dr. R. P. Harris remarked that this was the only Porro operation that had been complicated by diseased kidneys. The case was an unfavorable one in consequence of this complication. The albuminous character of the urine was supposed to be due to mechanical interference by the enlarged womb, but unfortunately this was not so. The bad habits of the patient had led to a general disease of the arteries as well as of the kidneys. The former were atheromatous. The Porro-Müller operation has been performed thirty-four times, the modified Porro eighty-two times, total, one hundred and sixteen cases, of which forty-eight per cent. have been successful in saving the lives of the mothers. When the pedicle or stump is dropped, it ceases to be a Porro operation. Of thirteen cases in which the stump has been dropped, eleven have been fatal. Dr. Godson is writing a full history of this operation, including the many experiments which have been made in animals to determine the best method for each step of the operation, and the cause of death. Dr. Porro has saved four out of five cases in his own hospitals. In the Milan Hospital, nine were saved out of twelve. In Germany the success has been poor, but in Austria better.

Dr. O'Hara asked why the Porro operation should be modified when it had been so successful in the hands of the originator.

Dr. Harris.—Dr. Müller was called upon to operate in a case in which the fœtus had been dead for some time and was putrid, the uterus being distended with gas. To prevent any septic matter finding its way into the abdominal cavity, he enlarged the abdominal incision, lifted the uterus out of the abdomen, and used cloths around it and over the wound before incising the uterus. This patient recovered. The mortality this year has been very slight.

Dr. E. E. Montgomery had been associated with Dr. Parish in this case, as one of the hospital staff, and at first thought the case should be allowed to go on to full term before operating, and that Cæsarean section or laparo-elytrotomy, as practised by Dr. T. G. Thomas, should be the selected form of operation; but Cæsarean section has been very fatal in large hospitals, doubtless because it is generally a last resort after the patient has been long hours in labor, and for that reason is dangerous. But if a large drainage-tube was passed through, entering at the abdominal incision and out of the vagina, and a constant flow of antiseptics kept up, a good condition might be secured.

During the operation, a few modifications suggested themselves; one of these was to divide the cervix uteri by a V-shaped incision, the peritoneal surfaces being united over the wound, a flat Peaslee drainage-tube being introduced, and the stump dropped. Dr. Harris tells me that this has been tried, but resulted unsuccessfully.

He thought the wire of the écraseur passed around the cervix before removing the child a source of danger to the latter, as well as being likely to embrace a loop of intestine.

DR. HARRIS, in criticising the plan of dropping the stump, called attention to the fact that the portion of uterus embraced in the ligature is not a pedicle, it is a stump, and will continue to contract, and oozing of blood, or even profuse hemorrhage, is liable to occur. It has been found impossible to prevent this by any form of ligature that has been tried. If the stump is dropped, this hemorrhage or oozing will take place into the abdomen, and will be a certain cause of death. Dr. Isaac E. Taylor came near success, but his patient died from thrombosis on the twenty-sixth day, during an attack of phlegmasia alba dolens. It would be very desirable to avoid the dragging on the abdominal wound.

DR. MONTGOMERY gave a short *résumé* of the cases treated by dropped stump and the causes of death in them.

DR. PARISH remarked that the disease of the kidneys was undoubtedly the cause of death, the implanting of the acute condition caused by pregnancy upon the previous chronic disease. He also spoke of the possibly deleterious effect of the ether upon the system laboring under such a condition of the kidneys. It made the administration of ether in such cases a very serious matter.

DR. PARISH also exhibited specimens from a case of

EXTRA-UTERINE PREGNANCY,

and made some remarks upon the history of the case. He had attended the patient in her first labor seven years ago. She was a brunette of very restless and active habits and disposition, and was quite uncontrollable; she was up and about her house a few days after her labor, and the result was sub-involution, which persisted until her death. During the interval she had passed out of his care and had been subjected to local treatment, including the use of sponge tents, these had developed pelvic inflammation, and later she was troubled with frequent micturition and dysmenorrhœa. She afterwards came under his care again for treatment of these troubles, and on one occasion he had applied leeches to the cervix and gave her positive orders not to leave her bed, but festivities were going on and she went down and assisted in making ice-cream and cake and later in eating them; this indiscretion was followed by a second metritis. He afterwards treated her for the dysmenorrhœa by numerous minute punctures of the cervix and the application of tincture of iodine, and the introduction of a sponge tent.

The next period was not so painful, and the second was missed. He told her she was probably pregnant; but two weeks later a slight show occurred, and, fearing an abortion, he advised rest in bed. She refused an examination, and would not be quiet. The flow continued, but did not increase; and there was pain in the pelvis in addition. Eleven days after the flow commenced, a sudden attack of intense pain occurred; the patient was completely prostrated, and was carried up-stairs. As he was not at home, Dr. O'Hara was called in, and used morphia hypodermatically. He found, on examination, a mass in the posterior part of the pelvis; the uterus was pushed forward against the pubes. He diagnosticated rupture of a Fallopian-pregnancy cyst, and internal hemorrhage, and gave opiates to relieve the intense pain. The pallor and exhaustion became more pronounced, and death occurred thirty hours after the first symptoms. Other physicians who saw the patient did not agree with Dr. Parish in his diagnosis. The autopsy revealed no recent peritonitis; there was blood in the pelvic and abdominal cavities; this had escaped from a ruptured cyst of the Fallopian tube. The fœtus exhibited was found free in the pelvic cavity. The position of the cyst was such that it would have been an easy operation to open the abdomen, and ligate and remove the cyst and ovary, and cleanse the pelvic cavity. The Fallopian tube involved is dilated, except at the uterine extremity. The other tube is occluded at the fimbriated extremity; inflammatory bands derange the relations of the different pelvic organs. We have here the history of inflammatory processes changing the epithelial linings and relations of the Fallopian tubes to the uterus and ovaries as predisposing causes of extra-uterine pregnancy.

DR. HARRIS remarked that the hemorrhage after conception, the peculiar location of the pain, and the pallor make the diagnosis an easy one. He had one patient that recovered spontaneously. The operation suggested by Dr. Parish has been performed once successfully. Dr. T. G. Thomas made the diagnosis in another case and wished to operate, but the husband, a physician, differed in opinion and would not consent; that patient lived sixty hours after the accident. Dr. Playfair in his book advises the operation.

DR. O'HARA saw the case early and could not make such a diagnosis; he saw no sign of internal hemorrhage then; he thought of peritonitis or cellulitis; there had been no history of a decidual cast of the uterus. He did not see how a positive diagnosis of extra-uterine pregnancy could have been made at that time. The patient was certainly going to die, and he would approve of an exploratory operation.

DR. PARISH remarked that Dr. O'Hara was perhaps right; he (Dr. P.) was the only physician present who looked at the case in that light, all the others disagreed and had their reasons. If this diagnosis of a probable extra-uterine fœtation had been made early, before the accident, then when the acute symptoms supervened a quick diagnosis could have been made as to the cause of the pain. He described a fold of peritoneum found behind the uterus, and as the clot had the appearance of different ages, portions being yellow, he suggested that an extra-peritoneal hemorrhage had first occurred under this fold, perhaps ten days before the intra-peritoneal hemorrhage which was the cause of death.

ACUTE GANGRENE OF THE ILEUM.

DR. BEATES reported the case of an infant which appeared well and hearty at birth, but died in collapse on the third day. An autopsy revealed acute gangrene of the mucous surface of eight feet of the ileum; hemorrhage had occurred into the intestine and was the immediate cause of death.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, October 4, 1883.

THE PRESIDENT, FORDYCE BARKER, M.D., LL.D., IN THE CHAIR.

THE first meeting of the Academy after the summer recess was held on Thursday evening, October 4th.

Previous to the meeting, the President, Dr. Fordyce Barker, issued the following circular:

"I assume that every Fellow of the New York Academy of Medicine must regard it as a most unfortunate event that anything should occur to interrupt its fraternal harmony, its useful work, and its progressive growth. While we cannot shut our eyes to the fact that this is the present condition of the Academy, it would be both useless and unwise to discuss the causes which have brought about this state of things, because, from their nature, they involve questions on which the most able, the most loyal, and the most conscientious men in the profession honestly differ. Let us accept this fact as inevitable, and that the Academy can do nothing which will effectively advance the interests of the profession by way of discussions, which irritate, but do not change convictions, or by arbitrary regulations, secured by shrewd tactics, but which carry no moral force.

"The Academy of Medicine is not fulfilling its mission when it is engaged in warm discussions of questions of casuistry, in polemical controversies, or in medical politics.

"The *Ephemeris* of Dr. Squibb quotes with approval an editorial from the *Boston Medical and Surgical Journal*, which contains the following sentence: 'The lesson also is so obvious that he who runs may read, that the more our Societies confine themselves to their proper field—the joint cultivation of medical science and good-fellowship—and the less they meddle with medical politics, the better will it be for their own future and the common good of the profession.'

"It seems to me that the truth of the above sentiment has been unfortunately, but clearly demonstrated by our Academy of Medicine.

"The question which we have now to meet is: What measures can be taken to secure for the Academy a return of its prosperity? by which I mean a restoration of its fraternal harmony and good memory of the past. The anodyne draught of oblivion is the first specific remedy for healing such ills as those under which the Academy is now suffering.

"The next point to be secured is such a change in our organic laws as will make it impossible that trouble and danger can ever occur again in the Academy.

"At our first meeting in October, certain amendments to the Constitution and By-laws will be proposed for discussion, and at the following meeting they will be submitted to the vote of the Academy.

"Every change proposed has been the result of a most careful study of the subject, and has a distinct purpose which will be obvious to all.

"I think that it will be apparent that the whole intent of the proposed amendments is to make the Academy of Medicine a purely scientific society, independent of all other organizations, to place its standard of ethics on a higher plane than before, and to prevent the possibility of any future troubles by the introduction of matters foreign to its avowed objects."

Accompanying this circular was a copy of the proposed amendments.

In consequence of this circular, the Council of the Organization for upholding the National Code of Medical Ethics in the State of New York, which consists of Drs. Abram DuBois, Austin Flint, Austin Flint, Jr., J. W. S. Gouley, John H. Hinton, Samuel T. Hubbard, William T. Lusk, Samuel S. Purple, and T. Gaillard Thomas, sent out the following communication to the Fellows of the Academy:

"The Council of the Organization for upholding the National Code of Medical Ethics in the State of New York beg to call your attention to a circular recently issued in which are proposed certain amendments to the Constitution and By-Laws of the New York Academy of Medicine.

"The Council cannot but regret the issuing of this circular as a covert movement, under a plea for harmony, in behalf of the organized effort in opposition to the National Code of Ethics. The proposed amendments, were they adopted, would eliminate from the Constitution and By-Laws everything relating to ethics, and surrender the Academy to those who advocate the abolition of all ethical codes. The Academy would thereby be deprived of the right of representation in the American Medical Association, and of affiliation with other medical organizations out of the State of New York.

"It may be assumed that there is no disposition on the part of those who are for upholding the National Code of Ethics to raise any discussion respecting the Code in the Academy. The Code has never been made a subject of discussion in the Academy by any one in favor of upholding it, and there is no ground for the supposition that it ever will be, unless it becomes necessary in the way of defence. The resolutions presented and adopted at the last meeting of the Academy had for their object the prevention of any future discussion relating to the Code.

"Every true friend of the Academy is earnestly requested to attend its meetings in order to resist the introduction of discussions and controversies in relation to ethics, by simply maintaining, in their integrity, the time-honored Constitution and By-Laws of this Institution, to which it owes its origin and prosperity."

At the meeting, after the reading the minutes, **Dr. Austin Flint, Sr.**, rose to a question of privilege, and he then made a personal explanation. Since the last meeting of the Academy, he said, he had been repeatedly accused of inconsistency because he had voted for the resolutions then adopted, after having. a year previously, offered a motion that all discussion of the question of medical ethics be indefinitely postponed in the Academy. He wished it to be distinctly understood, however, that he had acquiesced in the action then taken for the express purpose of permanently banishing all such discussion. He certainly did not want the question to come up again in the Academy, and would do what he could to prevent such an unfortunate occurrence.

The Secretary then read the following

COMMUNICATION FROM THE COUNCIL:

Hall of the New York Academy of Medicine,
October 4, 1883.

At a special meeting of the Council of the New York Academy of Medicine, held Monday evening, October 1, 1883, it was

Resolved, That the Council advise in the interests of the Academy and of peace and harmony that the proposed amendments to the Constitution and By-Laws be withdrawn.

Resolved, That the Council, after careful and mature consideration, do not approve of the proposed amendments to the Constitution and By-Laws.

The Statistical Secretary, D. F. V. White, read obituary notices of Drs. James L. Banks, Bronley Livingstone, Charles Wright, and Joseph Mosier, Fellows of the Academy, who had died since the last meeting; after which Dr. E. D. Hudson, Jr., Chairman of the Library Committee reported a large number of donations to the library.

Dr. Edward L. Keyes then moved the adoption, as a whole, of the following amendments to the Constitution and By-laws, recommended by the President; and in doing so remarked that he had undertaken to do this purely out of his personal regard for Dr. Barker, and his firm conviction that the amendments were for the best interests of the Academy. Their adoption, he thought, would offer an easy path to the solution of the difficulties which it was now encountering, since a neutral ground would thus be constituted on which all could stand alike. He was the agent of no party or faction, and had no connection with any, but stood for himself alone. He was not a New-Code man, but simply a supplicant for peace.

Dr. Alfred L. Loomis seconded the motion for the adoption of the proposed amendments, and remarked that he was fully convinced that grave dangers now threatened the prosperity and almost the existence of the Academy; but by adopting the amendments we place ourselves in a position in which such a state of affairs could never recur in the future. The discussion of medical ethics and politics would be banished for all future time. There were other Societies where all such questions legitimately belonged; but the Academy ought to be devoted solely to scientific work, and the promotion of good-fellowship in the profession. He would, therefore, urge their adoption, *first*, on the ground of the expediency; *secondly*, because medical ethics had no place in such a Society; *thirdly*, because if such questions are admitted, they would lead only to bitterness and dissension. Finally, he hoped that all present would endeavor to support the President in his efforts to save the Academy from degeneracy and perhaps destruction.

PROPOSED AMENDMENTS

CONSTITUTION.

Article VI. Section 1.—Strike out—2, A Committee on Medical Ethics; 3, A Committee on Medical Education.

Read: 1, A Committee on Admissions; 2, A Committee on Library.

Article VIII.—Strike out the whole as it now stands.

Read: The Academy reserves the right of discipline by admonition, suspension, or expulsion, by which all rights and privileges as a Fellow are forfeited, for violation of its By-Laws or Regulations, for unprofessional, ungentlemanly, or dishonorable conduct, and for public immorality and great crimes.

BY-LAWS.

By-Law X.

Strike out third paragraph in third sentence. Also strike out last sentence, for which read: Five members of the Council shall constitute a quorum for its ordinary meetings, but a majority of the Council shall be necessary for a quorum at its annual meeting in December, and at special meetings called by the President.

Add to *By-Law X.* as follows:

Section 2.—The Council, specially convened by the President for the purpose, shall have the power to inquire into any alleged infringement of the By-Laws or misconduct by any Fellow of the Academy, on a written charge, signed by three Resident Fellows; and the Fellow whose conduct is in question shall be invited to attend. If, after investigation, the charges are sustained by a majority vote of those present, the Council may determine by a majority vote whether the punishment shall be a private admonition or a public reprimand by the President at a meeting of the Academy (whether the offender be present or absent), or suspension for a definite period.

But in case the charge is of so grave a character that the Council, by a vote of two-thirds of those present, considers that the offender should be expelled, the report of the Council and its recommendations shall be referred to the Academy, of which due notice shall be given to every Resident Fellow four weeks previous to its final action. The vote shall be taken by ballot, and two-thirds of those cast shall be necessary to sustain the vote of expulsion.

By-Law XIII.

Strike out Section 3 as it now stands, and read as follows:

Section 3.—The Committee on Admissions, upon receiving from the Recording Secretary the names of the candidates proposed for Fellowship, with their professional credentials, shall make due inquiry concerning them as regards their personal character, their standing in the profession, and their eligibility as persons of honor, who do not assume peculiar designations, implying special modes of treatment.

Add to *By-Law XIII.* Sections 4 and 5, as follows:

Section 4.—The Committee shall report within three months such as may be deemed worthy of admission, and if for Resident Fellowship, the report shall specify the source whence the nominees derived their diplomas or license to practice, with the dates thereof.

Section 5.—If this Committee fail to report within the time specified upon any nomination submitted to them, any Fellow of the Academy may renew such a nomination; and, if this be seconded, a vote shall be taken, it being distinctly stated that the nomination has not been approved by the Committee on Admissions.

Strike out By-Laws XIV. and XV.; the subsequent By-Laws to be numbered XIV. consecutively to XXIV.

XXV. (new number as amended XXIV.):

Add: And all resolutions, except such as relate to its formal routine business, must be offered in writing at the meeting two weeks previous to the final action, and printed on the notice of such final action.

DR. AUSTIN FLINT, JR., moved that the amendments take the usual course and lie over for two weeks. DR. C. C. LEE moved, as an amendment, that the Academy go into committee of the whole for their discussion. DR. FLINT claimed that such an amendment was not in order, but the Chair having decided that it was admissible, it was amended and carried.

The President appointed Dr. Elsworth Eliot Chairman of the Committee of the Whole, and Dr. W. W. Carpenter was then appointed Secretary of the same.

DR. ELSBERG moved that, when the Committee rose, it should report to the Academy in favor of the amendments, but, before the motion was put to vote, DR. ROOSA called on Dr. Barker for a statement of his views in regard to the proposed changes in the Constitution and By-Laws.

DR. BARKER, after some preliminary remarks in which he said that he wished, as far as possible, to avoid everything that was connected with codes of ethics, he went on to say that after the action of the State Medical Society, in 1882, it was feared that the discussion of the questions raised by it would do great injury to the Academy, and interfere with its scientific work. In the April following, however, one who was esteemed and respected everywhere that medical literature was found (Dr. Flint), introduced a resolution to the effect that all matters pertaining to the Code should be indefinitely postponed. This was adopted unanimously, and the work of the Academy went on in the greatest prosperity until the proposal of the resolutions adopted at the last meeting, which had completely changed the aspect of affairs. Without wishing to cause the slightest ill-feeling, he could not but express the opinion that this action was most injurious to the Academy; imperilling its harmony and interrupting its progress. It divided the members into two parties, and on account of this it was impossible to elect any new Fellows. Without consulting with anyone, he set to work to discover some means by which this difficulty could be overcome, the prosperity of the Academy restored, and all possibility of the recurrence of similar troubles obviated. His aim was to place the Society on the highest plane of ethics, and at the same time rescue it from its present unfortunate condition; and as a preliminary step in his effort, he made a careful study of the constitution and by-laws of the great English Societies and of the Academy of Medicine in France. The amendments now offered were the result of much thought on his part, and he had drawn them up with no motive in view except the best interest of the Academy. It had seemed to him that those who had voted for the resolutions adopted at the last meeting (among whom were many of the hardest workers and most munificent benefactors of the Academy), would concur in the opinion that a solution of the difficulty could thus be reached; but to his astonishment and sorrow he had found that his judgment was wrong.

Dr. Barker then took up the proposed amendments *seriatim*, and briefly pointed out his reasons for the changes which he desired to have made. The abolition of the Committees on Ethics and Medical Education, he stated, would relegate the subject of ethics to the Council and the whole Academy. As to the Committee on Medical Education, such a committee at the present day was entirely useless. In enacting the proposed substitute for Article VIII., the Academy would protect itself from improper members, and at the same time it would be a purely scientific body. To the last By-Law, providing for the alteration of By-Laws, was added a clause, the object of which, he explained, was to prevent, in all future time, the adoption of resolutions introduced by parties or cliques without due notice.

Dr. Austin Flint, Jr., then rose and said, that before the meeting every member knew just what these proposed amendments meant. One of them simply left the Academy of Medicine without a code of ethics, and this amendment necessitated certain changes in the rest of the Constitution and By-Laws to accommodate them to this new order of things. Everybody knew that it did not make the slightest possible difference what the Committee of the Whole said or did about the matter. It had no power whatever, and the amendments would, of course, have to take the regular course and lie over until the next stated meeting. When they come up at that time, those who were in favor of the National Code would vote against them, and those who were in favor of the New Code would vote for them, and that was all that there was about the question of the adoption of the amendments. It required a three-fourths vote to secure their passage, and this, he believed, was absolutely hopeless. Consequently, he considered their introduction as nothing more nor less than a firebrand which would only increase the difficulties under which the Academy now labored. He did not see the slightest necessity for talking any more about these amendments. It took two sides to make a discussion, and he sincerely trusted that no friend of the National Code would say one word about them. The only way was for each Fellow who believed in that code, to come to the next meeting and vote against their passage. In conclusion, Dr. Flint explained that he would not have spoken at all if the Chair had not overruled his motion, and decided that the amendment to go into the Committee of the Whole was in order.

Dr. Barker now proposed as an amendment to the resolution of Dr. Elsberg, who accepted it, the following:

"*Resolved*, That, in the opinion of the Committee of the Whole, it is advisable to adopt the amendments to the Constitution and By-laws which have been prepared, and that the Chairman be instructed to report at the next stated meeting of the Academy on the morning of October 18th."

After some discussion on parliamentary points, this resolution was adopted. A motion was then passed that the Committee of the Whole rise, report progress, and ask leave to sit again at the meeting of October 18th.

The Committee accordingly rose, and Chairman Eliot made his report, after which Dr. Flint renewed his original motion, that the amendments take the regular course, and lie over until the next meeting. This was unanimously carried, and the Academy then adjourned.

CORRESPONDENCE.

ON THE MAPPING OUT OF VISCERAL DISEASES, IN AN ANILINE COLOR, ON THE SURFACE OF THE BODY.

To the Editor of The Medical News.

Sir: I have now used for more than sixteen months, throughout my residency in the Episcopal Hospital, a method of mapping out on the superficies of the body, in an indelible aniline color, the results of a physical exploration of the condition beneath. The markings remain fresh and clear in many cases, and visible in almost all, from one to several weeks or longer, affording a most valuable means of making daily or weekly comparisons in diseases running their course or changing within that time. The Eagle copying leads, found in every stationery store, afford the most convenient means of using the color. The leads are sold in sticks three and a half inches long, and the points simply need to be dipped in water to be ready for use.

By thus mapping them out, pneumonias, pleurisies, peri- and endo-carditis, and many other thoracic and many abdominal diseases can be made instantly to speak for themselves in staring lines and letters, not only faithfully and continuously representing the exact condition of a case when first examined, but making a mental picture long retained.

The following will serve as an illustration: I visited A. M. at his house, and, finding that he had right apex pneumonia, admitted him to the ward. After a careful exploration of the chest, the point of the pencil was quickly dipped in water, and the whole upper part of the right chest cut off from that below by a broad purple line running from sternum to spine, following the lowest level at which bronchial breathing was heard.

Then above the line over the third rib in front were printed in large letters, **Fl. Bron. br. Broncoph**, designating the whole area as *flat*, and that bronchial breathing and bronchophony were heard everywhere within its limits.

An inch and a half below this an interrupted line separated an area corresponding to the middle lobe, which was markedly congested, and the letters **D. Br. ves.** indicated dulness on percussion and bronchovesicular breathing. The month and day were recorded along with these signs, and then from day to day changes were studied by this map as the standard of comparison, or further changes were noted and distinguished from the paler ink of the older markings. Complete failure resulted in a few cases of typhoid fever where there was profuse sweating.

It afforded great satisfaction in a case of acute articular rheumatism to hear the clipping pericardial friction-sound over the base of the heart, and, after recording by a dot of the pencil with the date alongside, to be able to trace the slightest change in position or number of points throughout the whole history of the case.

A hard, nodular, cancerous mass at the pylorus was felt well up under the diaphragm, and its most prominent point marked by a small cross, the next day another cross marked a fall, and so its movements were traced over a large part of the epigastrium by measurements made when the stomach was in all states of distention, the record graphically showing on the harsh, dry skin through weeks of illness, and remaining to speak for itself on the post-mortem table. The device is so simple and almost self-suggestive that I am not surprised to learn that others have used it in a more or less limited way; but, if I have not already been forestalled in attracting general attention by publication, I feel sure that so valuable an expedient will be generally adopted when known, especially by all who are engaged in class-demonstration, or in studying a large number of cases at one time.

A chest or abdomen so mapped is legible over the largest of our clinical amphitheatres, and when the patient is reintroduced, no student needs a more impressive picture to recall all the conditions of the case at the last séance.

Personally, it has saved me hours of laborious investigation in my ward-work, and I carry in mind a picture of cases of small pleuritic effusion along the spine in typhoid, represented in aniline by an undulating outline enclosing the letters Æg. (ægophony), which must long since have slipped my memory as particular cases, had I depended on the usual routine of examination and note-taking.

A few seconds daily serve for verification, and in this way a large number of cases can be intelligently and satisfactorily kept within the mental horizon at one time. Yours respectfully,

Howard A. Kelly, M.D.

323 South Seventeenth Street,
Philadelphia.

CELSUS ON THE TREATMENT OF HYDROPHOBIA.

To the Editor of The Medical News.

Sir: In your issue for Oct. 6, there is a letter from Louis W. Atlee, M.D., taking me to task for a supposed slight to Celsus, in my recently published "Remarks on Hydrophobia." As the correction is founded on an assumption of your correspondent that I had not consulted the original writings of Celsus, I content myself, in regard to it, with pointing out that his assumption is erroneous.

But the fifth and sixth paragraphs of the letter referred to, charge me, by inuendo, with literary dishonesty. Of this I wish to say, that it is to be regretted that Dr. Atlee, who is an entire stranger to me, should have made an accusation which the smallest inquiry would have taught him was unfounded, and that, in his zeal for the "ethics" of Celsus, he should have forgotten what is demanded by the ethics of the present day. Yours truly,

Charles W. Dulles.

[We greatly regret that any paragraph should have appeared in our columns which, even by imputation, could be supposed to cast an imputation upon the literary methods of Dr. Dulles, whom we know to be a most painstaking and conscientious student. In this particular instance, too, it has happened to come within our knowledge that he took special pains to consult a large number of original authorities, and Celsus, we are informed, was among the number, in his research. —Ed.]

THE SO-CALLED CONSTANTINOPLE PORRO OPERATION. A CORRECTION.

To the Editor of The Medical News.

Sir: In several papers on the Porro operation, one case has been erroneously credited to Dr. Dallas, of Constantinople. A letter received from that city recently shows the operation to have been a utero-ovarian amputation in a case of intra-mural fibroid, with excessive floodings. There was no fœtus as reported (saved), but the woman, as stated, recovered. For such a condition we now perform the less dangerous operation of Battey, which we have seen produce a perfect cure, in the production of the menopause, and atrophy of the tumor.

Very respectfully,
Robert P. Harris, M.D.

NEWS ITEMS.

CINCINNATI.

(*From our Special Correspondent.*)

The Cincinnati Health Board.—A great deal has been said of late by our local journals and newspapers about the inefficiency of our Health Board, and it certainly has the mark of inefficiency upon it. It has been the rule for a number of years that the City Council should elect a Board of Health, who in turn appointed a health officer. Dissatisfaction with this mode of caring for the sanitary interests of the city soon arose, and grew so strong that an attempt was made last spring to modify it. The Legislature enacted a law abolishing the Health Board, and providing for the appointment, by the Judges of the Superior Court, of a Health Commissioner, with a salary of $3000 annually, with full control of the sanitary department, and with power to appoint a large number of subordinates, including a Registrar of Vital Statistics, milk, meat, and market inspectors, district physicians, etc. But all this was offset by the refusal of the three Judges to perform the duty imposed upon them. The city was then left for several months without so much as a nominal Board of Health. During this time, however, Dr. D. D. Bramble, the health officer for the previous year, continued his services with the same energy and efficiency as before, and succeeded in freeing the city from smallpox—an end which it had been his aim to accomplish throughout his service. Then the Council decided that it was its duty to appoint a new Board of Health. Five saloon-keepers and a physician were their choice. The health officer appointed by this Board is not a physician, as has been customary, but a business man, with nothing to recommend him to the place but his promise to do his duty. The whole measure was confessedly a political one, and applicants for subordinate positions, even the district physicians, were made to profess allegiance to the ruling party before their applications were considered. Merit was a secondary qualification. That the present Board is illegal is, however, unquestionable, for the law abolishing such a body still exists, and it is probable that an attempt will be made during the coming winter to remodel the Act of the Legislature so as to have the appointing power placed in the hands of officers who will use it. This brief account, though of not much importance in itself, serves to show the need in our State of a more efficient means of providing for the health of its people, and at the same time the difficulty that stands in the way of all attempts in that direction.

Fortunately, we have not suffered from any lack of protection, for the city has been remarkably healthy during the past summer, and could have gotten along very well with no Health Board at all. The mortality report for the week ending October 6, shows 88 deaths, or 16.39 per 1000, per annum. This is a lower rate than at this season for several years. Of these 88 deaths, 25 were infants under one year of age, and 9 were 60 or upwards. Three were from diphtheria, the only contagious disease reported.

A Children's Hospital was opened on Monday of this week, with a capacity of thirty beds. It is the charity of a number of wealthy and benevolent gentlemen. The institution is in charge of Dr. F. Forchheimer, Professor of Physiology and Children's Diseases in the Medical College of Ohio, and it is to his energy that its origin is largely due. He will be assisted by Drs. W. S. Christopher and Robert Stewart. Dr. Ed. W. Walker is the Surgeon, and Dr. W. W. Seely the Ophthalmologist. The building occupied was formerly a residence, but has been thoroughly remodelled. A wing to be used as a mortuary is now building. This is the first hospital for children exclusively, that we have had. It is located in the most populous part of the city, where it is likely to do the most good. None but children under twelve years and infants will be admitted, and no contagious diseases will be treated.

The Cæsarean Section was performed recently at the Good Samaritan Hospital by one of the resident physicians, Dr. Edwin W. Ludlow. The patient was a woman, dying of phthisis pulmonalis, in the last month of pregnancy. A living child was extracted, but owing to its emaciated condition it lived but an hour.

CANADA.

(*From our Special Correspondent.*)

Quebec Medical Board.—The semi-annual meeting of the College of Physicians and Surgeons of the Province was held in Quebec on the 26th ult., Dr. Ternieux, President, in the chair.

Sixteen candidates for the license presented University degrees, and obtained the license without examination. Four candidates were examined, of whom three were rejected. The matriculation examiners reported that forty-nine candidates had presented themselves, of whom only nineteen passed, and were thereby qualified to enter upon the study of medicine.

A discussion took place on the causes of the high percentage of rejection at the preliminary examination, and a committee was appointed to confer with the masters of the high schools and seminaries, in order that a more suitable system of training should be given to pupils preparing for the examination.

Opening of the Schools.—The introductory lecture of McGill Medical Faculty was given by Dr. Workman, of Toronto, the oldest, save one, living graduate of the school, and a hale, active octogenarian. After the lecture, a conversazione was held in the Redpath Museum. The recently appointed Professors, Drs. Shepherd, Gardner, Browne, and Stewart, gave special introductory lectures to their classes on the 2d. Prof. Penhallow, late of Tokio University and of the Haughton Experimental Farm, is conducting the botany class in the Medical School during the absence in Europe of Principal Dawson.

The Montreal School of Medicine (French) reassembled on the 2d, when Dr. D'Orsonneus, the President, delivered the inaugural address, in which he reviewed the troubles of the school, and congratulated the members that they had been successful in their struggle with Laval.

The Kingston School of Medicine for Women opened on the 2d, when Dr. Lavell addressed the students. Three scholarships have been founded, and the prospects of the school as a separate institution are good. A guarantee fund of $7000 has been raised.

The Ravages of Yellow Fever in Mexico and Panama. — Surgeon Main, of the Marine-Hospital Service at Brownsville, Texas, reports to the Surgeon-General the following items brought by the latest Pacific mail: At Mazatlan, Mexico, yellow fever is still the reigning terror. Every house is a hospital. It is impossible to keep track of the deaths, which run into the hundreds daily. The inhabitants are fleeing in every direction.

Later reports from Brownsville state that yellow fever is still raging in Mexico, and that it is said to be travelling northward up the California Gulf; and that President Gonzales, in a recent message to Congress, referring to the unhealthy condition of the Capitol, said that a loan of $2,000,000, with which to improve the sanitary condition of Mexico, had been recommended.

The latest advices received from Mazatlan were dated September 16. At that time there were two thousand people sick, some of whom were dying of yellow fever, and others for want of attention or on account of a prevailing famine. The advices referred to stated that there were only two inexperienced doctors in the city, and they were worn out from overwork. At Manzille, the report says, "cartloads of dead bodies have been buried in one common receptacle."

Yellow fever has existed in Panama since April, but almost exclusively among the natives. It has recently become more pernicious, and is now spreading widely. It has made its appearance in the below-named Pacific coast cities: San José, Costa Rica, Nicaragua, Acapulco, Zucatula, Manzanillo, Corrientes, and San Blas; and is spreading northward.

At Guayamas so many are down with the fever that many die from want of attendance. The dead are buried by the cartload by Indians. At Hermosillo the fever death-rate is about twenty daily.

Surgeon-General Hamilton, of the Marine-Hospital Service, has telegraphed the collector at Yuma, Ariz., to appoint sanitary inspectors at that place and at Benson to inspect trains arriving from the south. This action has been taken because of information received from the Governor of Arizona that a soldier at Huachaca, in that Territory, had died of yellow fever recently.

A recent report from Guayamas, dated September 22, states that yellow fever, or malignant coast fever, still continues there, and has been particularly fatal to Americans in the employ of the railway company. A report to the State Department from the United States Consul at Mazatlan, September 12, says that the port is infected with yellow fever, and that all vessels leaving it for the United States refuse to receive passengers, and have no communication with the port.

A telegram from Guayamas, under date of October 3, states that there have been only three deaths in the last two days. Twenty-six deaths are reported from Hermosillo, and all along the road are victims who have been overtaken with the fever and who are unable to proceed further. News received from the Yaqui River reports that the fever is spreading among the Indians. A letter received here announces the death of two of the party which left here in August to survey the Tocolovampo Railroad. No names were given.

Despatches from Las Vegas, N.M., of Oct. 9, state that more yellow fever refugees have arrived there. They say the half has not been told about the horrors of the scourge at Guayamas and Hermosillo.

Yellow Fever in Alabama.—Reports from Brewton, Ala., give two deaths since the 3d inst, and thirteen cases under treatment. The physicians there are of the opinion that it is hemorrhagic malarial fever, but pressure is so strong that the neighboring towns are quarantined, and trains are ordered to go through Brewton without stopping.

Yellow Fever at Pensacola.—A telegram from Commandant Welch, at the Pensacola Navy Yard, dated 6th inst., states that three new cases of yellow fever have appeared, and one death has taken place. It has been intensely hot for a week past. There was also one new case and one death in Warrington from the fever.

Yellow Fever at Ship Island Quarantine Station.—The surgeon in charge of the quarantine station at Ship Island reports that during the week ending September 29th, there were eleven cases of yellow fever and three deaths at that station.

Quarantine in San Francisco.—The passengers on board the yellow fever steamer "Newbern," in the harbor of San Francisco, have been permitted to come ashore, with the exception of two patients and a nurse. All danger to the city from yellow fever may now be said to have passed.

Quarantine at New Orleans.—In accordance with a recommendation of the Board of Health of New Orleans, the Governor has issued a proclamation withdrawing the quarantine proclamation heretofore issued, to take effect November 1st. After October 15th, vessels from infected ports will be detained not less than three days for disinfection.

Smallpox in New Orleans —For the week ending September 22, there were ten deaths from smallpox in New Orleans.

Quarantine at Mobile.—Recent despatches state that quarantine was established at Mobile, on Oct. 9th.

Pleuro-pneumonia in Pennsylvania.—Information has been received by the Secretary of the State Board of Agriculture, that pleuro-pneumonia has broken out among the cattle of Lehigh County.

The American Climatological Association.—Forty names were enrolled in membership in the new medical society formed in the rooms of the New Academy of Medicine, New York, Sept. 25th.

The name chosen was "The American Climatological Association," and its objects were stated to be the study of diseases of the respiratory organs, together with the influence of climate thereon.

A committee consisting of Drs. Tyndale, New York; Bruen, of Philadelphia; and Garland, of Boston, was authorized to act temporarily as a Board of Censors, and to draft a constitution and by-laws, and submit the same to the next meeting.

The following officers were elected:

President.—A. L. Loomis, New York.
First Vice-President.—F. J. Knight, Boston.
Second Vice-President.—W. H. Geddings, Arkansas.
Secretary and Treasurer.—J. B. Walker, Philadelphia.

It was decided to hold the annual meeting in 1884 at Washington either immediately before or after the meeting of the American Medical Association, and the following were appointed a Committee of Arrangements: Dr. Garnett. Washington, Chm.; Drs. Donaldson, Baltimore; Bosworth, New York; Shurley, Detroit; J. C. Wilson, Philadelphia.

With bright auspices for a live, active, and most useful organization, the new Association starts on its career.

Harvard Medical School.—On Wednesday next, Harvard Medical School will celebrate its Centennial Anniversary and will dedicate its new building. The celebration will consist in an address by the President of the University, an oration by Emeritus Professor Oliver Wendell Holmes, and the presentation of a portrait of Prof. Holmes and a bust of Prof. Henry J. Bigelow. Subsequently the new building will be dedicated.

Health of Connecticut.—The report of the Secretary of the State Board of Health, for August, states that the prevalence of typhoid fever is the most important element in the sanitary history of the month, when the relative prevalence of this type of disease and malarial diseases are considered. A few years ago scarcely a case was reported from the malarial region; now the cases begin to exceed the malarial, and in places like Manchester, where the two types exist together, the influence is seen in the prevalence of typho-malarial fever. Two fatal cases of this form are reported from South Manchester, and several cases of typhoid fever. The use of a small stream for the disposal of sewage, which is obstructed by numerous dams, thus causing beds of deposits, which from the natural effects of the dry season must have been more or less uncovered and exposed to the sun, furnishes favorable conditions for the causation of typho-malarial fever. This has been repeatedly illustrated in different places. These same agencies would favor the spread of typhoid fever were the malarial influence wanting. The general decrease in the prevalence of malaria and the malarial influence upon other diseases is very marked in a large part of the territory where they have been for quite a long period the governing type. With a few exceptions, which tend to strengthen the idea that there must be some local causes to induce the unusual prevalence, he did not learn of any general activity in the progress or spread of malaria. While there is a much greater prevalence and a more marked influence over other diseases in the northeasterly frontiers of the region that has already been invaded by malaria, there is no such decided prevalence as exists in the region about Manchester. As has been stated, acute-intermittent is very common, and both typho-malarial and malarial fevers exist. In the present uncertainty as to the ultimate nature of malaria, all such manifestations are of peculiar interest.

The cases reported from Hampton this month and previously, were imported by a gang of Italian laborers. A few cases of typho-malarial are reported in August, also typhoid fever, the latter indigenous.

The prevalence of typhoid fever is noticeable in Waterbury; from New Hartford, Thomaston, and several places in Litchfield County; from a part of Killingly and from several towns in Windham County. More or less cases of typhoid fever are reported also from different parts of every county.

Health in Michigan.—Reports to the State Board of Health, for the week ending September 29, 1883, indicate that neuralgia, pneumonia, and remittent fever have increased, and that diarrhœa, consumption, influenza, and inflammation of the brain have decreased in area of prevalence.

Including reports by regular observers and others, diphtheria was reported present during the week ending September 29, and since, at twenty places, namely, Clarence, Coldwater, Coopersville, Detroit, Ensley, Grand Rapids, Hillsdale, Ida, Lansing, Lowell, Mt. Pleasant, Monroe, Nashville, Newberry, Niles, Polkton, Quincy, Houghton County, Reading, Somerset, and Utica. Scarlet fever at twenty-one places: Bingham, Belvidere, Coopersville, Detroit, East Jordan, Fenton, Grand Haven, Grand Rapids, Ithaca, Kalamazoo, Lansing, Lowell, Ludington, Manistee, Middleville, Monroe, Morenci, Nashville, Polkton, Tyrone, and Whitehall. Measles at four places: Charlevoix, Detroit, Monroe, and Somerset.

Obituary Record.—Surgeon-General Charles H. Crane, U. S. Army, died in Washington, D. C., on Wednesday, October 10th, of hemorrhage of the throat, after a brief illness. He was born in Rhode Island, in 1826, and was appointed to the Medical Department of the Army from Massachusetts in February, 1848. He was promoted to the rank of Surgeon in May, 1861, and to the position of Assistant Surgeon-General on July 28, 1866. His appointment to the position of Surgeon-General was confirmed by the Senate in August, 1882.

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ORIGINAL LECTURES.

THE NEW CENTURY AND THE NEW BUILDING OF THE MEDICAL SCHOOL OF HARVARD UNIVERSITY.

An Oration delivered at the One Hundredth Anniversary of the Foundation of the Medical School of Harvard University, October 17, 1883.

BY OLIVER WENDELL HOLMES, M.D., LL.D.

THE Medical School of Harvard University enters, with the commencement of the present season, upon the second century of its existence. By a fortunate coincidence it takes possession at this same time of the noble edifice which a generous public has reared for the use of the teachers and students of this institution.

Yesterday; to-day; to-morrow. Let us look backward at the period when this school began its teachings, and mark some of the longer strides which bring the professional condition of the earlier epoch to that of our own. Let us see where we stand to-day, and we shall know better what to hope for the future of the teaching, the science, and the art of healing.

We are in the habit of counting a generation as completed in thirty years, but two lives cover a whole century by an easy act of memory. I, who am now addressing you, distinctly remember the Boston practitioner who walked among the dead after the battle of Bunker's Hill, and pointed out the body of Joseph Warren among the heaps of slain. Look forward a little while from that time to the period at which this Medical School was founded. Eight years had passed since John Jeffries was treading the bloody turf on yonder hill-side. The independence of the United States had just been recognized by Great Britain. The lessons of the war were fresh in the minds of those who had served as military surgeons. They knew what anatomical knowledge means to the man called upon to deal with every form of injury to every organ of the body. They knew what fever and dysentery are in the camp, and what skill is needed by those who have to treat the diseases often more fatal than the conflicts of the battlefield. They knew also, and too well, how imperfectly taught were most of those to whom the health of the whole community was intrusted.

Dr. John Warren, a younger brother of Dr. Joseph Warren who fell at Bunker's Hill, was the first mover in the project of founding a medical school in connection with Harvard College, and was the first Professor of Anatomy and Surgery. Those who remembered his teaching have spoken to me with admiration of the eloquence and enthusiasm with which he lectured. Dr. John Warren was a man of great energy, spirit, and ability. The Lectures of the newly founded school were delivered in Cambridge until the erection of the building known as the Massachusetts Medical College, in Mason Street, in the year 1815. It was no easy matter for a busy Boston practitioner to deliver a course of lectures in the University town. But Dr. Warren did not ask whether it was easy or not. "In the fulness of professional business he daily passed over Charlestown ferry to Cambridge, there not being a bridge at that time; and sometimes, when impeded by ice, was compelled to take the route through Roxbury and Brookline to Cambridge, and to return on the same morning, after himself performing the dissections and giving a lecture sometimes three hours long." So tells us worthy Dr. Thatcher, in the Appendix to his American Medical Biography.

Benjamin Waterhouse, honorably known for having been the introducer of vaccination into America, was the first Professor of the Theory and Practice of Medicine. I remember him well, and carry the scar of the vaccination he performed on me. His powdered hair and queue, his gold-headed cane, his magisterial air and diction, were familiar to me from my boyhood. Dr. Waterhouse had his degree from Leyden, where he wrote and defended a Thesis, *De Sympathia Partium Corporis Humani, ejusque in explicandis et curandis morbis necessaria consideratione.* He had some learning, which he was disposed to make the most of, as perhaps we all are if we have it, and laid himself open to the playful sallies of the students of his time, one of whom announced a course of Lectures on Oudenology, which was supposed to be a travesty of some of his prelections.

The first Professor of Chemistry was Aaron Dexter. It was the forming period of that science. Black, Cavendish, Priestley, Lavoisier were building it up with their discoveries. A course of Chemical Lectures delivered in Boston or Cambridge at that day was probably, as it certainly was at a later day, very entertaining and not wholly uninstructive. Phlogiston had not yet definitely taken itself to the limbo of negative entities. But however crude the theories, we may be pretty sure that there was left in the student's mind a memory of startling precipitations, of pleasing changes of color, of brilliant coruscations, of alarming explosions, and above all of odors innumerable and indescribable.

It is sad to think that professors honored in their day and generation should often be preserved only by such poor accidents as a sophomore's jest or a graduate's anecdote. The apparatus of illustration was doubtless very imperfect in Dr. Dexter's time, compared to what is seen in all the laboratories of to-day. We may admire his philosophy and equanimity, therefore, in recalling the story I used to hear about him.

"This experiment, gentlemen," he is represented as saying, "is one of remarkable brilliancy. As I touch the powder you see before me with a drop of this fluid, it bursts into a sudden and brilliant flame," which it most emphatically does *not* do as he makes the contact. "Gentlemen," he says, with a serene smile, "the experiment has failed; but the principle, gentlemen, —the principle remains firm as the everlasting hills."

Three teachers only, where we have forty, or nearly that number! But when the great University of Göttingen was established, the illustrious Haller filled the one Chair of Botany, Anatomy, Surgery, and Medicine. I called it a Chair—it was rather a Settee of Professorships.

It is to be regretted that we have not a list of the text-books in use during that first period of the school. Dr. Waterhouse would naturally refer his students to the learned Gaubius, the voluminous Van Swieten, the illustrious Boerhaave. The excellent Dr. Fothergill was his uncle; the immortal Jenner was his second Creator, and their names, with that of Dr. Lettsom, were often on his lips. Sydenham, Pringle, and Cullen, he speaks of as being in the hands of all his students, and his references show a considerable extent of reading.

The text-books in Anatomy were probably Cheselden and Monro, perhaps Winslow, and, for those who could read French, Sabatier. The Professor himself had the magnificent illustrated works of Albinus and of Haller, the plates of Cowper (stolen from Bidloo) and others. The student may have seen from time to time, if he did not own, the figures of Eustachius and of Haller. Haller's First Lines of Physiology were doubtless in the hands of most students. The works of Pott, of Sharp, and most of all of John Hunter, were taking the place of Heister and the other earlier authorities.

Smellie was probably enough the favorite in his department. What chemical text-books Dr. Dexter put into the hands of his students in 1783 I will not venture to conjecture.

And now I will ask you to take a stride of half a century, from the year 1783 to the year 1833. Of this last date I can speak from my own recollection. In April, 1833, I had been more than two years a medical student attending the winter lectures of this school, and have therefore a vivid recollection of the professors of that day. I will only briefly characterize them by their various merits; not so much troubling myself about what may have been their shortcomings. The shadowy procession moves almost visibly by me as I speak: John Collins Warren, a cool and skilful operator, a man of unshaken nerves, of determined purpose, of stern ambition, equipped with a fine library, but remarkable quite as much for knowledge of the world as for erudition, and keeping a steady eye on professional and social distinction, which he attained and transmitted: James Jackson, a man of serene and clear intelligence, well instructed, not over book-fed, truthful to the centre, a candid listener to all opinions; a man who forgot himself in his care for others and his love for his profession; by common consent recognized as a model of the wise and good physician: Jacob Bigelow, more learned, far more various in gifts and acquirements than any of his colleagues; shrewd, inventive, constructive, questioning, patient in forming opinions, steadfast in maintaining them; a man of infinite good nature, of ready wit, of a keen sense of humor, and a fine literary taste; one of the most accomplished of American physicians; I do not recall the name of one who could be considered his equal in all respects: Walter Channing, meant by nature for a man of letters, like his brothers William Ellery and Edward; vivacious, full of anecdote, ready to make trial of new remedies, with the open and receptive intelligence belonging to his name as a birthright; esteemed in his specialty by those who called on him in emergencies. The Professor of Chemistry of that day was pleasant in the lecture-room, rather nervous and excitable, I should say, and judiciously self-conservative when an explosion was a part of the programme.

Those who are curious to know what hand-books we students used in 1833 will find they were nearly as follows: In Anatomy, the works of John and Charles Bell, that of Wistar, and the Dublin Dissector. In Physiology, Haller's First Lines and Richerand. In Chemistry, Webster's edition of Brande. In Surgery, Samuel Cooper's work, with his Surgical Dictionary as a book of reference. In Theory and Practice, Dr. Good's Study of Medicine was adopted by Dr. James Jackson and generally followed. Gregory's Practice was often seen in the student's hands, and Laennec's Treatise on Diseases of the Chest and their Physical Signs was just coming to their notice in the form of Dr. Forbes' Translation. Denman and Dewees were the favorites in their special branches. Bigelow's Sequel to the Pharmacopœia was much sought after by the students of this school. Like the excellent and serviceable work recently published by his successor in the Chair of Materia Medica, it was unpretentious enough for the most scrupulous teachers of the high and dry Northern latitudes.

Other works read by students were, Hunter on the Blood, Fordyce on Fever, Heberden, and, of course, Cullen and the earlier standards which happened to be in their instructors' libraries. Louis was just beginning to be known among us. The Lectures of Sir Astley Cooper and of Mr. Abernethy were eagerly read. One fellow-student of mine read through the three solid quartos of Morgagni. These are the principal authorities I recall as lying about our study and lecture-rooms. But my memory is, no doubt, sometimes at fault.

Great stories had been reaching us for some time of the schools and hospitals of Paris. Dr. John Jackson, nephew of our old Professor, came home with news of the fine opportunities there offered. Young James Jackson, the Professor's son, was there still, writing home letters which remain on published record, to show how much of talent, and zeal, and high promise was lost to the medical profession by his early death. Especially did he speak of Louis, whom he had chosen as his principal teacher, and of whom he became the favorite pupil and the very dear friend. These circumstances decided me to seek the same centre of instruction, and so, in April, 1833, I left Boston to pursue my studies in Paris. Dr. John Jackson bade me farewell with a look as if I were indeed on my way to the good Bostonian's heaven, and handed me a small square of India-rubber, his own newly suggested pleximeter, or instrument to be used for mediate percussion, which he wished me to show to Louis and the other great Paris doctors.

I have said something of my Boston teachers, and I will devote a few words to those whose instructions I followed in Paris, and to their most renowned professional contemporaries in other European countries, at the risk of some repetition of what I have said elsewhere.

Old Boyer, Baron Boyer, who, in spite of his title, kept his own books for sale at his own house, was still creeping around the wards of La Charité. At Hôtel Dieu was the great surgeon Dupuytren. On the other side of the river was his large and loud rival, Lisfranc. Roux, best known by his report of his medical visits to England, was operating and lecturing—lecturing, parenthesis within parenthesis—ovum, germinal vesicle, germinal spot, until his embryo meaning vanished in the invisible; Velpeau, a reclaimed rustic, who, by sturdy industry, grew out of his wooden shoes into an erudite author and teacher and a celebrated practitioner; Civiale, the inventor of lithotrity; Ricord, whose mercurial temperament, to say nothing of his practice, displayed itself in his lively clinical promenades; these were some of the more famous surgical celebrities of fifty years since. Louis, Andral, Chomel, Rostan, Trousseau, Bouillaud were the best known teachers of clinical medicine. Cruveilhier was Professor of Anatomy in the École de Medecine, and Orfila, the handsome Dean of the Faculty, lectured upon some branches of medical jurisprudence.

Two or three water-logged old professors were moored to their chairs; one of them not so very old, but with a good many ancient barnacles about him, one formidable three-decker, Broussais, with his upper tier of guns still above the water-line, and banging away at the assailants of his famous "physiological doctrine." Some of the specialists I recall were Sichel, in ophthalmology, Biett, in dermatology, Dubois, the younger, and a younger Baudelocque, inventor of a certain lemon-squeezer-like machine about as threatening to the future of the race as the invention of that other medical practitioner, Dr. Guillotin.

The works in the hands of French students were those of the great teachers and practitioners just mentioned. Jules Cloquet's Anatomy was a favorite manual. Sabatier's and Maygrier's were sometimes met with. The much more extensive and thorough work of Cruveilhier was a little later to come into common use. The great work of the same author on Pathological Anatomy was of a still later date. Bourgery's magnificent, somewhat dandified Anatomy, if I may borrow this term, was in course of publication. Its showy figures were got up like opera dancers, primarily for anatomical study and secondarily for æsthetic gratification. Magendie's Physiology had replaced that of Richerand. Boyer was still a leading authority in Surgery. The name of Jean Louis Petit was frequently cited in the lectures of Marjolin, himself scarcely remembered at the present day. Bayle and Corvisart were giving place to Louis and Bouillaud. Laennec held his position as few inventors and discoverers can hope to do in the face of the after-comers who improve on their improvements.

What had been the most signal advances in the science and art of medicine between 1783 and 1833, the first half of the century we are considering?

In medical science the method of studying the human body by its constituent elements—the *General Anatomy* of Bichat—which is to common descriptive anatomy what geology is to geography, would still hold the first place if it could claim all that the microscope has done for it. It was at any rate a great onward movement, with far-reaching results for physiology and pathology.

Next to this would come the discoveries of Sir Charles Bell and Magendie of the distinct motor and sensitive functions of certain nerves and nerve-roots.

The most important practical achievement was the introduction of vaccination. I know that this practice has been and is even at the present day the subject of violent attacks and bitter prejudices. It is only very recently that our distinguished visitor — our fellow-citizen—by the female side—the Right Honorable Sir Lyon Playfair, at home alike in the laboratory of science and when presiding over the deliberations of the British House of Commons, has had to defend it—nobly and successfully he did it—in that august assembly. There is always an unconvinced and irreclaimable minority. Those who believed not Moses and the Prophets would not believe though one rose from the dead to convince them. Most of us, I feel sure, are ready to say of Jenner's discovery, borrowing some of Luther's words about justification by faith, that vaccination is a test *stantis vel cadentis medicinæ.*

Laennec's invention of auscultation holds the next place to vaccination in the records of practical improvement during our first half century. The recognition of the affection of the kidneys known as "Bright's disease," and the separation of the too familiar and fatal malady, diphtheria, from those with which it was long confounded, are other notable advances made during the period in question.

If we compare the two half centuries, we may balance the following improvements against each other:

Against the discovery of the double nerve function the extended knowledge of the reflex function.

Against "General Anatomy," the Cell-doctrine, due to the discoveries made by the use of the achromatic microscope, to which we also owe the discovery of the minute organisms, so important in the history of disease.

Against vaccination we may offset surgical anæsthesia.

Against the stethoscope the medical thermometer.

We must divide the honors of lithotrity and those of ovariotomy between the two periods.

The beneficent changes in the treatment of insanity, effected by the earlier labors of Pinel and Esquirol have been admirably carried on in the more recent period.

Many other and not inconsiderable improvements in medical science and art had taken place in our first half century, as may be seen in Cuvier's Report on the Progress of the Natural Sciences. But the last fifty years have been not less richly productive. I can only indicate in the briefest manner, some few among their acquisitions.

Modern scientific chemistry is a mystery to us who were brought up in the old school of pyrotechnic experimenters. It seems to us to make over its theories and its nomenclature about once in ten or twenty years. But that may be our ignorance. We know as much as this, that our Professors teach real and most valuable practical knowledge by making the student work, and work thoroughly, in the laboratory.

Physiology is a new science, we might almost say, since the perfecting of organic analysis, the invention of the achromatic microscope, and of the numerous instruments of precision which record the vital actions and conditions.

Anatomy has added the more exact study of regions and of sections to its earlier methods of investigation.

Operative surgery has of late years achieved its greatest triumph in the establishment of abdominal section as a legitimate and safe operation. First employed by an American surgeon, Dr. McDowell, of Kentucky, in 1809, in the hands of Spencer Wells and his contemporaries it has rescued and is rescuing hundreds of lives. Tenotomy by subcutaneous section is another new and valuable operation. Plastic surgery has learned to patch deformities as a skilful housewife patches a garment. Limbs which would have been sacrificed are saved by improved methods of dressing, especially by the use of antiseptics. Resection of joints or of portions of the shaft of a bone has in many cases taken the place of amputation. Let me not forget the operation of paracentesis with aspiration of the thorax in acute pleurisy, as first practised by Dr. Henry Ingersoll Bowditch and Dr. Morrill Wyman. But enough has been said to show that the last half of our century has justified itself for existing. I shall return to some of these matters when speaking of the new edifice where they are to be the subjects of instruction.

In the prevention of disease the gain has been extraordinary. The germ-theory, alluded to as one of the results of the perfecting of the microscope, has done much to account for the phenomena of many diseases and to indicate the means of arresting their development. The recognition of domestic malaria as the frequent source of disease is of vast importance. The phrase "drain fever" has saved hundred of lives.

It is harder to speak of medical practice—the treatment of internal diseases, fevers, visceral inflammations and the like. The practice of drugging for its own sake, the fatal bequest of the English apothecary, or "general practitioner," whose profit was made on his medicines, had infected the medical profession of this conntry, as I believed, when some twenty and more years ago in guarded terms, often misquoted, I denounced it somewhat too epigrammatically for some of my friends of the Massachusetts Medical Society. Professor Gairdner of the University of Glasgow has recently used language much plainer than my innocent allusion to the probable effect of sinking a cargo of miscellaneous drugs among the fishes. It has been objected, he says, "that the Scottish graduate in medicine was not sufficiently conversant with the details of compounding and dispensing powders, and pills, and mixtures, and above all draughts (at 2s. 6d. a piece) to be taken two, three, four, or five times a day; in other words, that he had not sufficiently mastered the technical details by which his neighbor, the English apothecary, was able to accomplish the great ideal of the 'surgery-boy' type—the dispensing of immense quantities of 'physic' in the most complicated prescriptions, to pass unquestioned down the willing throats of Her Majesty's lieges."

There can be little doubt that the practice thus originating influenced the whole professional public of England to a very considerable extent, and through that public introduced the over-drugging system into her colonial dependencies and the States which some of these became. However this may be, great changes have taken place within the later decades of my remembrance in the practice of medicine. Bleeding is an almost unknown operation. Of the four great remedies of Dr. Holyoke's and Dr. James Jackson's time, antimony has fallen from grace, and calomel, instead of being next the apothecary's right hand, as the letter e is to the printer's, has gone to an upper shelf, where it may be supposed to repent of its misdeeds like Simeon Stylites. Cotton Mather had said a century and a half ago, "I am not sorry that antimonial emetics begin to be disused." He had said too, more rhetorically, "Mercury, we know thee: but we are afraid thou wilt kill us too, if we employ thee to kill them that kill us." This was a lively way of putting a thought long afterward made into a famous saying.

While old drugs and old methods have become obsolete, new drugs and new methods have come in to take their place. The first aphorism of Hippocrates, "Life is short, art is long," and so on, is a glittering generality. The second aphorism is one of daily practical application, never to be forgotten. "Not only must the physician attend properly to his own duties, but he must see that the patient, the attendants, and all the external conditions are properly ordered." As the over-employment of drugs gives way to juster views, the hygienic conditions and personal attendance on the patient are likely to be better cared for. The less the patient is annoyed with over-medication—painful and disgusting remedies—the more tractable he is likely to be, and the less likely to throw his medicine out of the window, where it will kill the chickens instead of the fishes. The more attention is likely to be paid to air and cleanliness and comfort, the more to the kind of nourishment and the modes and times of giving it. In proportion as the work of the apothecary diminishes the cares of the nurse are called upon to render disease endurable by all the arts known to a skilful attendant. Little things mean a great deal in the sick-room. "Will you have an orange or a fig?" said Dr. James Jackson to a fine little boy now grown up to goodly stature, and whom I may be fortunate enough to recognize among my audience of to-day. "A fig," answered Master Theodore, with alacrity. "No fever there." said the good Doctor, "or he would certainly have said an orange."

Now it is just in these little unimportant, all-important matters that a good nurse is of incalculable aid to the physician. And the growing conviction of the importance of thorough training of young women as nurses, is one of the most hopeful signs of medical advancement. So much has been done and is doing that the days of the Sairey Gamps and Betsey Prigs are numbered. I cannot help saying in this connection that the Registry of Nurses fortunately connected with the Boston Medical Library, itself of comparatively recent formation, is a blessing to our community which can hardly be over-estimated. What is there in the hour of anguish like the gentle presence, the quiet voice, the thoroughly trained and skilful hand of the woman who was meant by nature and has been taught by careful discipline to render those services which money tries to reward but only gratitude can repay? I have always felt that this was rather the vocation of women than general medical and especially surgical practice. Yet I myself followed a course of lectures given by the younger Madame Lachapelle in Paris, and if here and there an intrepid woman insists on taking by storm the fortress of medical education, I would have the gate flung open to her as if it were that of the citadel of Orleans and she were Joan of Arc returning from the field of victory.

I have often wished that disease could be hunted by its professional antagonists in couples,—a doctor and a doctor's quick-witted wife making a joint visit and attacking the patient,—I mean the patient's malady, of course,—with their united capacities. For I am quite sure that there is a natural clairvoyance in a woman which would make her as much the superior of man in some particulars of diagnosis as she certainly is in distinguishing shades of color. Many a suicide would have been prevented if the doctor's wife had visited the victim the day before it happened. She would have seen in the merchant's face his impending bankruptcy while her stupid husband was prescribing for his dyspepsia and endorsing his note; she would recognize the lovelorn maiden by an ill-adjusted ribbon – a line in the features,—a droop in the attitude,—a tone in the voice,—which mean nothing to him, and so the brook must be dragged to-morrow. The dual arrangement of which I have spoken is, I suppose, impracticable, but a woman's advice, I suspect, often determines her husband's prescription. Instead of a curtain lecture on his own failings he gets a clinical lecture,—on the puzzling case, it may be, of a neighbor suffering from the complaint known to village nosology as "a complication of diseases," which her keen eyes see into as much better than his as they would through the eye of a small-sized needle. She will find the right end of a case to get hold of, and take the snarls out as she would out of a skein of thread or a ball of worsted which he would speedily have reduced to a hopeless tangle.

I trust I have not dwelt too long on this point, which grew out of my consideration of the great change that has so largely substituted the careful regulation of all the conditions surrounding the patient for the drugging system derived from the practice of the English "Apothecaries." Like the Father of Medicine in the aphorism which I have quoted, we consider attention to these conditions entitled to precedence relatively to all active interference with the course of disease.

Yet we must not be ungrateful to the pharmacist for the useful agents, old and new, which he puts in our hands. Opium and cinchona appear in our modern pharmacopœia with all their virtues, but freed by chemical skill of the qualities which most interfered with their utility. Mercury is no longer considered a panacea, but it is still trusted for important special services. Most of the remedial plants have yielded their essential principles to chemical analysis and have got rid of the useless portions which made them bulky and repulsive. Iodine, bromine, salicine in their various compounds have, within the present century, conferred inestimable aid in the treatment of some of the most formidable diseases. Many other new remedies, such as carbolic acid, glycerine, chloral, have been added to the list of those which are of daily use in combating particular symptoms, or are adapted to certain exceptional conditions. The method of administering remedies by inhalation has been greatly extended, and the admirable invention of the process of subcutaneous injection—a method, I may remark, tried upon himself and made the subject of a thesis by the late Dr. Enoch Hale, a graduate of this school—has become next to etherization, the most rapid and potent means of subduing pain and other forms of suffering. I need not speak of medical electricity, which has proved so serviceable in the treatment of nervous and muscular affections.

I despair of enumerating all the improvements which have been effected in the various specialties into which the practice of medicine has become subdivided within these twenty or thirty years. The ophthalmoscope, the improved ear speculum, the rhinoscope, the laryngoscope—hold out their mirrors to enlighten us, or open their mouths to proclaim their own value. Diagnosis has reached a wonderful degree of accuracy; prognosis has become a terrible kind of second-sight which is not always handled carefully enough; treatment gains a little with every decade. The history of therapeutics records a succession of marches and counter-marches, with a slight onward movement as the total result of every completed revolution; slight, but precious to humanity.

I cannot pass over the most encouraging fact of the growth of medical libraries. We have a right to congratulate ourselves on the prosperity of that which has sprung into existence in this city within the last few years. It seems to me to mark the beginning of a new era in the medical history of the city. But what can I say of the immense library formed, but always forming, at Washington, and how can I sufficiently praise the work of Dr. Billings and his associates, one of the results of which comes before us in that colossal catalogue which is one of the best proofs of the advancing civilization of the great republic?

It was time for the Medical School of Harvard University—of that Institution of which Massachusetts must always be proud so long as she has anything to be proud of—it was time for this school to plant its chief edifice in a fairer position, and erect it on a broader foundation than those with which it has been so long obliged to be contented. Let us not be ungrateful to the memory of our earlier benefactors; to the State for the grant which proved of such value in its time; to the individuals who gave land and money when the former buildings were constructed. But the little Mason Street building was long ago outgrown, and that which succeeded it had in turn become wholly insufficient for the needs of the school.

You will pass from beneath this hospitable roof to the new edifice, in which, as we trust, many successive generations of medical students are to receive a large part of their instruction. As you enter its doors, as you survey its halls and lecture-rooms, its laboratories and their appliances, some of you may be ready to exclaim, What! All this to teach a student to cut off a limb or administer a potion?

The question is a natural one, and the answer is easy. The Art of Healing is supported, advanced, illuminated, by the various kinds of knowledge which are recognized as belonging to the Science of Medicine. And the Science of Medicine, like all other kinds of classified knowledge, is best taught, most easily and thoroughly learned, when taught systematically, because facts are most clearly perceived and most firmly retained in the memory when presented in their serial relations. The teaching of the various branches included in a complete medical course requires ample provision for its multiplied exigencies.

You will enter or look into more amphitheatres and lecture-rooms than you might have thought were called for. But if you knew what it is to lecture and be lectured to in a room just emptied of its preceding audience, you would be thankful that any arrangement should prevent such an evil. The experimental physiologists tell us that a bird will live under a bell-glass until he has substituted a large amount of carbonic acid for oxygen in the air of the bell-glass. But if another bird is taken from the open air and put in with the first, the new-comer speedily dies. So when the class I was lecturing to was sitting in an atmosphere once breathed already, after I have seen head after head gently declining and one pair of eyes after another emptying themselves of intelligence, I have said, inaudibly, with the considerate self-restraint of Musidora's rural lover—

Sleep on, dear youth; this does not mean that you are indolent, or that I am dull; it is the partial coma of commencing asphyxia.

You will see extensive apartments destined for the practical study of chemistry and of physiology. But these branches are no longer studied as of old by merely listening to lectures. The student must himself perform the analyses which he used to hear about. He must not be poisoned at his work, and therefore he will require a spacious and well-ventilated room to work in. You read but the other day of the death of an esteemed fellow-citizen from inhaling the vapors of a broken demijohn of a corrosive acid. You will be glad to see that every precaution is taken to insure the safety and health of our students.

Physiology, as now studied, involves the use of much delicate and complex machinery. You may remember the balance at which Sanctorius sat at his meals, so that when he had taken in a certain number of ounces the lightened table and more heavily weighted philosopher gently parted company. You have heard, perhaps, of Pettenkofer's chamber, by means of which all the living processes of a human body are made to declare the total consumption and product during a given period. Food and fuel supplied; work done. Never was the human body as a machine so understood; never did it give such an account of itself as it now does in the legible handwriting of the cardiograph, the sphygmograph, the myograph, and other self-registering contrivances, with all of which the student of to-day is expected to be practically familiar,

I do not see any room marked on the plan of the new building as intended especially for the use of the microscope. But that a proper apartment will be assigned to this use I feel assured. I have referred to the modern achromatic microscope as having created a new era in Medical Science. I have no time to tell what it has done for Anatomy, Physiology, and Pathology, besides its great services in other departments of knowledge. But to those who have never seen its miracles I can give an illustration, which they will find it hard to believe I did not borrow from some new Gulliver's Travels or from some Jules Verne's imagination. Yet what I shall say is the simplest truth in the world to any microscopic expert, and may be easily verified by any sceptic.

If we had to examine the structure of a human body by the naked eye,—or, as I will venture to call it, *gymnoscopic* or rather *gymnopic* inspection,—it would make a great difference whether our subject were of the natural dimensions or whether he were a Liliputian, or a Brobdingnagian. We should lose sight of many particulars in the structure of the Liliputian which we easily detect in a man of the natural size. We should find many things plain enough in the Brobdingnagian which we do not notice in the man of ordinary dimensions on account of their minuteness. Thus, for instance, we should find that man is shingled all over, or tiled, if you will—covered with scales, more literally, just as a serpent is. The statue of Liberty, the arm of which the cast in the square at New York has made familiar to us, the statue of Carlo Borromeo at Milan, that of Bavaria, or the new statue of Germania, any one of these changed to flesh and blood would be a great source of knowledge to a gymnopic anatomist. You will observe that the naturalist could examine only a small portion of one of these colossal figures at a time. Of course the same thing is true of the microscopic man I am going to describe. He must be examined in small fragmentary portions.

The individual from whom we will suppose the porion under examination to have been taken was, we will say, of short stature; a little more than five feet two inches in height, and weighing one hundred and twenty pounds. Our microscope, a rather powerful, but not extraordinarily powerful one, magnifies a thousand diameters. This fragment, then, thus magnified, represents an individual just one mile in height. He would ten times overtop the loftiest of the pyramids; twenty times the tallest of our steeples. He could bestride our good city from Long Wharf to Charles Street. His breadth and thickness being in proportion to his height, his weight would be one hundred and twenty thousand million pounds, equal to sixty million tons. He could take our State House up as we should lift a paving stone and fling it into the waters beyond Boston Lighthouse—cleaning out that palace of the people by a summary process quicker than the prætorian bands of Domitian or Commodus would have cleaned out a Roman Senate Chamber that dared to have an opinion of its own. Such is the microscopic man as we see him piecemeal in that wonderful instrument. It is the telescope of the microcosm—the master-key to the portals of a new universe, and the student must be carefully taught how to use it.

Among the various apartments destined to special uses, one will be sure to rivet your attention; namely, the Anthropotomic Laboratory, known to plainer speech as the Dissecting-Room. The most difficult work of a medical school is the proper teaching of practical anatomy. The pursuit of that vitally essential branch of professional knowledge has always been in the face of numerous obstacles. Superstition has arrayed all her hobgoblins against it. Popular prejudice has made the study embarrassing and even dangerous to those engaged in it. The surgical student was prohibited from obtaining the knowledge required in his profession, and the surgeon was visited with crushing penalties for want of that necessary knowledge. Nothing is easier than to excite the odium of the ignorant against this branch of instruction and those who are engaged in it. It is the duty and interest of all intelligent members of the community to defend the anatomist and his place of labor against such appeals to ignorant passion as will interfere with this part of medical education, above all, against such inflammatory representations as may be expected to lead to midday mobs or midnight incendiarism.

The enlightened legislation of Massachusetts has long sanctioned the practice of dissection, and provided means for supplying the needs of anatomical instruction, which, managed with decent privacy and discretion, have served the beneficent purpose intended by the wise and humane law-givers, without doing wrong to those natural sensibilities which are always to be respected.

During the long period in which I have been a Professor of Anatomy in this Medical School I have had abundant opportunities of knowing the zeal, the industry, the intelligence, the good order and propriety with which this practical department has been carried on. The labors superintended by the Demonstrator and his assistants are in their nature repulsive, and not free from risk of disease, though in both these respects modern chemistry has introduced great ameliorations. The student is breathing an air which unused senses would find insufferable. He has tasks to perform which the chambermaid and the stable-boy would shrink from undertaking. We cannot wonder that the sensitive Rousseau could not endure the atmosphere of the room in which he had begun a course of anatomical study. But we know that the great painters, Michael Angelo, Leonardo, Raphael, must have witnessed many careful dissections, and what they endured for art, our students can endure for science and humanity.

Among the large number of students who have worked in the department of which I am speaking during my long term of service,—nearly two thousand are on the catalogue as graduates,—there must have been some who were thoughtless, careless, unmindful of the proprieties. Something must be pardoned to the hardening effect of habit. Something must be forgiven to the light-heartedness of youth, which shows itself in scenes that would sadden and solemnize the unseasoned visitor. Even youthful womanhood has been known to forget itself in the midst of solemn surroundings. I well remember the complaint of Willis, a lover of the gentle sex, and not likely to have told a lie against a charming young person; I quote from my rusty memory, but I believe correctly:

> She trifled! ay, that angel-maid—
> She trifled where the dead was laid.

Nor are older persons always so thoughtful and serious in the presence of mortality as it might be supposed they would show themselves. Some of us have encountered Congressional committees attending the remains of distinguished functionaries to their distant place of burial. They generally bore up well under their bereavement. One might have expected to find them gathered in silent groups in the parlors of the Continental Hotel or the Brevoort House; to meet the grief-stricken members of the party smileless and sobbing as they sadly paced the corridors of Parker's, before they set off in a mournful and weeping procession. It was not so; Candor would have to confess that it was far otherwise; Charity would suggest that Curiosity should withdraw her eye from the key-hole; Humanity would try to excuse what she could not help witnessing; and a tear would fall from the blind eye of Oblivion and blot out their Hotel-bills forever.

You need not be surprised, then, if among this large number of young men there should have been now and then something to find fault with. Twice in the course of thirty-five years I have had occasion to rebuke the acts of individual students, once in the presence of the whole class, on the humane and manly sympathy of which I could always safely rely. I have been in the habit of considering myself at liberty to visit the department I am speaking of, though it had its own officers; I took a part in drawing up the original regulations which governed the methods of work; I have often found fault with individuals or small classes for a want of method and neatness which is too common in all such places. But in the face of all peccadilloes and of the idle and baseless stories which have been circulated, I will say, as if from the chair which I no longer occupy, that the management of the difficult, delicate, and all-important branch committed to the care of a succession of laborious and conscientious Demonstrators, as I have known it through more than the third of a century, has been discreet, humane, faithful, and that the record of that department is most honorable to them and to the classes they have instructed.

But there are better things to think of and to speak of than the false and foolish stories to which we have been forced to listen. While the pitiable attempt has been making to excite the feelings of the ignorant against the School and the University, hundreds of sufferers throughout Christendom—throughout civilization—have been blessing the name of Boston and the Harvard Medical School as the source from which relief has reached them for one of the gravest injuries, and for one of the most distressing of human maladies. I witnessed many of the experiments by which the great surgeon who lately filled a chair in Harvard University has made the world his debtor. Those poor remains of mortality of which we have heard so much have been of more service to the human race than the souls once within them ever dreamed of conferring. Dr. Bigelow's repeated and searching investigations into the anatomy of the hip-joint showed him the band which formed the chief difficulty in reducing dislocations of the thigh. What Sir Astley Cooper and all the surgeons after him had failed to see, Dr. Bigelow detected. New rules for reduction of the dislocation were the consequence, and the terrible pulleys disappeared from the operating amphitheatre.

Still more remarkable are the results obtained by Dr. Bigelow in the saving of life and the lessening of suffering in the new method of operation for calculus. By the testimony of those renowned English surgeons, Sir Henry Thompson and Mr. Erichsen, by the award to Dr. Bigelow of a sexennial prize founded by the Marquis d'Argenteuil, and by general consent, this innovation is established as one of the great modern improvements in surgery. I saw the numerous and patient experiments by which that priceless improvement was effected, and I cannot stop to moan over a scrap of integument, said to have been made imperishable, when I remember that for every lifeless body which served for these experiments a hundred or a thousand living fellow-creatures have been saved from unutterable anguish, and many of them from premature death.

You will visit the noble hall soon to be filled with the collections left by the late Professor John Collins Warren, added to by other contributors, and to the care and increase of which the late Dr. John Jackson of precious memory gave many years of his always useful and laborious life. You may expect to find there a perfect golgotha of skulls, and a platoon of skeletons, open to the sight of all comers. You will find portions of every human organ. You will see bones softened by acid and tied in bow-knots; other bones burned until they are as light as cork and whiter than ivory, yet still keeping their form; you will see sets of teeth from the stage of infancy to that of old age, and in every intermediate condition, exquisitely prepared and mounted; you will see preparations that once formed portions of living beings now carefully preserved to show their vessels and nerves; the organ of hearing exquisitely carved by French artists; you will find specimens of human integument, showing its constituent parts in different races; among the rest, that of the Ethiopian, with its cuticle or false skin, turned back to show that God gave him a true skin beneath it as white as our own. Some of these specimens are injected to show their bloodvessels; some are preserved in alcohol; some are dried.

There was formerly a small scrap, said to be human skin, which had been subjected to the tanning process, and which was not the least interesting of the series. I have not seen it for a good while, and it may have disappeared, as the cases might happen to be open while unscrupulous strangers were strolling through the Museum. If it has, the Curator will probably ask the next poor fellow who has his leg cut off for permission to have a portion of its integument turned into leather. He would not object, in all probability, especially if he were promised that a wallet for his pocket, or a slipper for his remaining foot, should be made from it.

There is no use in quarrelling with the specimens in a museum, because so many of them once formed a part of human beings. The British Government paid fifteen thousand pounds for the collection made by John Hunter, which is full of such relics. The Hunterian Museum is still a source of pride to every educated citizen of London. Our foreign visitors have already learned that the Warren Anatomical Museum is one of the sights worth seeing during their stay among us. Charles Dickens was greatly interested in looking through its treasures, and that intelligent and indefatigable hard worker, the Emperor of Brazil, inspected its wonders with as much curiosity as if he had been a Professor of Anatomy. May it ever remain sacred from harm in the noble hall of which it is about taking possession! If violence, excited by false outcries, shall ever assail the treasure-house of anthropology, we may tremble lest its next victim shall be the home of art, and, ignorant passions once aroused, the archives that hold the wealth of literature perish in a new Alexandrian conflagration. This is not a novel source of apprehension to the thoughtful. Education, religious, moral, intellectual, is the only safeguard against so fearful a future.

To one of the great interests of society, the education of those who are to be the guardians of its health, the stately edifice which opens its doors to us for the first time to-day is devoted. It is a lasting record of the spirit and confidence of the young men of the medical profession, who led their elders in the brave enterprise, an enduring proof of the liberality of the citizens of Boston and of friends beyond our narrow boundaries, a monument to the memory of those who, a hundred years ago, added a School of Medicine to our honored, cherished, revered University, and to all who have helped to sustain its usefulness and dignity through the century just completed.

It stands solid and four-square among the structures which are the pride of our New England Venice—our beautiful metropolis, won by well-directed toil from the marshes and creeks and lagoons which were our inheritance from nature. The magnificent churches around it let in the sunshine through windows stained with the pictured legends of antiquity. The student of nature is content with the white rays that show her just as she is; and if ever a building was full of light—light from the north and the south; light from the east and the west; light from above, which the great concave mirror of sky pours down into it; this is such an edifice.

The halls where Art teaches its lessons and those where the sister Sciences store their collections, the galleries that display the treasures of painting and sculpture, are close enough for agreeable companionship. It is probable that in due time the Public Library with its vast accumulations will be next-door neighbor to the new domicile of our old and venerated institution. And over all this region rise the tall land-marks which tell the dwellers in our streets and the traveller as he approaches that, in the home of Science, Arts, and Letters, the God of our Fathers is never forgotten, but that high above these shrines of earthly knowledge and beauty are lifted the towers and spires which are the symbols of human aspiration ever looking upward to Him, the Eternal, Immortal, Invisible.

ORIGINAL ARTICLES.

REPORT OF A POST-MORTEM EXAMINATION IN A CASE OF RECURRENT HIP-DISEASE,

IN WHICH SUBCUTANEOUS OSTEOTOMY HAD BEEN SUCCESSFULLY PERFORMED EIGHT MONTHS BEFORE DEATH.

By H. R. WHARTON, M.D.,

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The case from which the specimen represented in the accompanying drawing was taken was one of coxalgia, presenting marked angular deformity, which was relieved by a subcutaneous section of the femur below the lesser trochanter.[1]

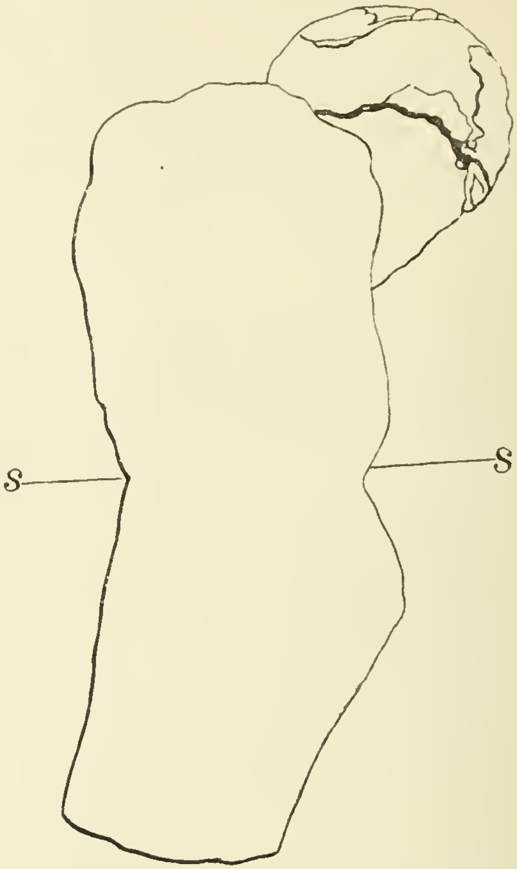
The patient, James C., aged nine years, was admitted to the Children's Hospital, July 31, 1882, suffering from coxalgia of the right hip which had been subjected to no treatment for some months before his admission to the hospital. The right thigh was found much contracted upon the pelvis, and adducted; he also suffered severe pain upon the slightest attempt to straighten the affected limb. He was treated by extension, and at the same time constitutional remedies were administered. His general condition improved markedly, but the faulty position of the limb still persisted, so that, as the active symptoms of the disease had disappeared, it was thought best to remedy this malposition by a subcutaneous division of the femur.

This operation I performed on November 25, 1882, and it was followed by a very satisfactory result in correcting the deformity. The patient, as soon as the union was firm at the seat of section of the bone, was allowed to get out of bed and walk about with the aid of a high shoe on the foot of the affected limb.

One morning, some months after the operation, the nurse, in dressing the boy, noticed a swelling in the neighborhood of the great trochanter of the affected limb, and called the attention of the house-surgeon to it, who discovered a large abscess, which, as it was pointing, he opened.

From this time, the patient grew rapidly worse. Abscesses formed at various points, above Poupart's ligament, in the right lumbar region just above the ilium, and a spontaneous dislocation of the head of the bone occurred backward on the dorsum of the ilium, and he finally died on August 15th from exhaustion. A post-mortem examination of the diseased hip-joint revealed the head of the bone lying upon the dorsum of the ilium, and surrounded by pus; the head of the femur was carious superficially at points, but a portion of the articular cartilage remained healthy in appearance; the change in the neck of the bone was not marked. The most extensive signs of disease were found in the acetabulum, which was entirely denuded of articular cartilage, was carious, and communicated with the cavity of the pelvis. The union of the femur at the seat of section was found firm, and the deformity resulting from the operation was slight, as can be seen by examining the accompanying wood-cut:

The history of the above case, together with the wood-cut of the specimen, is, I think, of peculiar interest, not only from the fact that I believe it to be the only specimen so far obtained showing the condition of the femur after a subcutaneous section with Adams's saw, for the patients who do badly after this operation generally die rapidly from exhaustion following the profuse suppuration, which interferes with union of the bone at the point of section, but also because it plainly shows that the operation recommended by Mr. Gant—section of the femur below the lesser trochanter—which was the one performed in this case, is one which is followed by very slight deformity at the seat of operation.



Upon this latter point, it must be acknowledged, some diversity of opinion exists, especially among English surgeons, some of whom state that Gant's operation merely substitutes one deformity for another; but an examination of the specimen will, I think, give the most important evidence upon this point, for it will be seen that the deformity resulting from the operation is very slight.

A question which might with propriety be asked is, Had the operation any direct connection with the final result of the case? I think not, for the wound of operation healed kindly; the patient was able to walk about, and was much improved in his general condition. The specimen shows firm union at the seat of section; the head and neck of the bone show little evidence of disease, and the most marked lesions are confined to the acetabulum and pelvis, whose indirect connection with the seat of operation would certainly negative any causal relation.

The symptoms of acute ostitis which so suddenly supervened in this case can be traced, I think, to a fall upon the diseased hip, which the boy acknowledged he had received while at play in the playroom, and of which he said nothing at the time, fearing it would necessitate his being confined to bed.

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[1] Cases of Subcutaneous Osteotomy, American Journal of the Medical Sciences, July, 1883.

This case, although most unfortunate in its termination, has, I think, a very direct bearing upon that mooted point, the position at which to divide the femur, and seems to show that Mr. Gant's modification of Adams's operation is one that may be undertaken with a reasonable assurance of success as regards the correction of the deformity following certain cases of coxalgia.

1405 Locust Street, Philadelphia.

THE SIMULTANEOUS OCCURRENCE OF CHANCROID AND CHANCRE

By JOHN FERGUSON, M.A., M.D., L.R.C.P.,
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That chancroid and the initial lesion of syphilis can occur at the same time in a person who has exposed himself has been both asserted and denied. The following very brief account of a case, of the genuineness of which there is no doubt from the circumstances, will set the possibility of this dual occurrence beyond doubt.

Mr. J. C., a student, who has been known to me for years, and on whose word the utmost reliance could be placed, called on me one morning and remarked that he thought he had been "caught." He told me that three nights ago he had gone out with another young man and that they had visited "two houses." He told me that he had never been with a woman previously to the night mentioned. This I can fully believe. That he never was out again I know for a fact myself.

When I saw him first there was considerable irritation, and by the end of a week from the date of his exposure a well-marked chancroid. I ordered him to remain in his room, perfectly quiet, which he did, and gave him a wash consisting of sod. bibor. ℥j, glycerini ℥ij, aquam ad ℥iv. With this he was told to sponge the sore often, and in the intervals to keep a pledget of cotton-wool, soaked in the lotion, applied. This went on well, and by the end of four weeks his chancroid could be regarded as really healed.

Some five or six days from the date of his last call upon me regarding his local sore he came again, and stated that he thought he felt a hard nodule on the opposite side of the penis, just behind the glans. This initial sore gradually took on the characters of the indolent ulcer, with a hard, widely extended base. In due time the inguinal glands enlarged, the rash on the skin appeared, and there were great loss of appetite, severe headache, much cachexia, and a good deal of fever. The case afterwards proved to be a very severe one indeed.

That there can be no doubt as to the real character of the two sores is clear to my mind, for the first was a most typical "soft sore," while the second was followed by constitutional syphilis. From my knowledge of the patient I can rely so fully upon his statements that there is really no doubt of the statement made by him that he "never was out in his life, excepting that one night." In the next place, he frequented two places of ill-fame. Now whether he contracted both diseases in one place, or one in one house and the other in the second, would be interesting to know. The patient succeeded in bringing to my office the woman he had been with in the first place. On examination I found she had a plentiful supply of chancroids, but no appearance of syphilis. It was after the hard sore had appeared on the young man that I sought and obtained this examination of the woman. In the interval that had elapsed since the student had been with her, she might have contracted her sores from some other person, but she asserted that she had the sores and was using a wash for them at the time when Mr. J. C. made her acquaintance. I succeeded in keeping track of this woman for nearly a year and never found the first evidence that she was a victim to syphilis.

We must conclude, then, that the young man contracted his local sores from the person above mentioned, and that his severer disease was due to the intercourse with the second woman. This second woman was a rather famous person, known as "Bell." Though I never could obtain an interview with her, I saw another student, suffering from syphilis, who stated that he got his disease from "Bell" about the same date as did Mr. J. C. This seemed to settle the question in my mind. How it may be with others I cannot say.

MEDICAL PROGRESS.

Kairin.—Since Dr. Filehne, a few months ago, introduced to notice the remarkable antipyretic action of kairin—an artificial alkaloid described as being the hydrochlorate of oxy-chinolin-ethyl—the drug has been given by others whose experience confirms that of the introducer. Thus Dr. Sassetzki (*St. Petersburger Med. Wochenschrift*, September 1st) states as his experience of its use in a case of typhus that kairin is a valuable antipyretic, doses of half a gramme reducing high fever to a normal temperature, which can be kept down by repeating the doses. The pulse falls together with the temperature, and the excretion of nitrogenous and phosphatic substances is lessened. The urine assumes a green color, which disappears very rapidly on ceasing the administration. It is curious that the fall of temperature in this case was not accompanied by sweating. No ill effects resulted from the drug. Another case is recorded by Dr. Knipping, of Neuwied (*Berliner klinische Wochenschrift*, September 10th), which may be briefly given here. A young woman, about twenty years of age, suffered from puerperal pyrexia for about nine days. On the fourteenth day after her confinement she was allowed to rise and take a bath. Next day she complained of pain in the left thigh, and symptoms of parametritis appeared, which were not controlled by the application of ice, leeching, etc., periphlebitis of the left leg also occurred with much irregular pyrexia, and the temperature reached nearly 105° F. On the twenty-fourth day there occurred periphlebitis of the right leg, and the case was further complicated by intestinal catarrh, bronchitis, and some dulness at the apex of the right lung. The morning temperature was 104°; evening, 105.4°, with very slight remissions; pulse 120 to 130, small and irregular. Quinine had been given in full doses without any influence, and the weakness of the patient precluded a resort to cold baths, so that on the thirty-fourth day, when the temperature reached 106.4°, and the heart was failing markedly, resort was had to kairin. It was given in doses of grs. viiss, in gelatine capsules, every hour. After the first dose the temperature fell to 102.2°, with profuse sweating; after the fifth, to 100.2°. The pulse did not correspondingly fall at first, remaining at 100. A reduction of the dose to grs. iv was followed by a rise in the temperature to 105.4°, with return of the bad symptoms, so that grs. viiss were again given hourly for four hours, when the temperature had fallen to 101.2°. For the next four hours grs. iv were given, with relapse of fever to 102.2° and 103°, again reduced to 100° by resort to the larger dose. The administration was continued for a week, and by the forty-first day the condition was much improved—temperature about 100.4°; and the intestinal and pulmonary symptoms had passed away. On now omitting the drug there was a slight rise in temperature, but this was easily controlled, and the case did well. In the seven days she had taken 220 doses of kairin without any toxic effects, beyond slight pricking sensations on the nose and forehead after the first dose. The urine became of a deep dark-green color, free from albumen and casts, the normal color returning if the drug was discontinued for twelve hours. The writer describes the sweating as being most marked, subsiding as soon as the kairin ceased to act and the temperature rose. He believes the drug in this case to have been the means of saving the patient's life, and insists upon the dose being repeated hourly if the antipyretic action is to be maintained.—*Lancet*, September 29, 1883.

SUBPERITONEAL INJECTIONS OF ALBUMINATE OF IRON IN CHRONIC ANÆMIA.—PROF. A. VACHETTA, having noticed the results obtained with this preparation when administered in the ordinary way, has endeavored to ascertain whether the peritoneum would not absorb it better, in larger quantities and more quickly than the mucous membrane of the stomach. From experiments on dogs, he concludes that the effects of albuminate of iron are more readily obtained by subperitoneal administration than by any other method, and that no inconveniences result from this mode of administration.—*Gazz. degli Ospitali*, No. 35, 1883.

KNEE-HÆMARTHROSIS.—At the late meeting of the British Medical Association, MR. JOHN FAGAN read a paper on this subject, and reported four cases. In referring to the diagnosis, he said that it should not be difficult if attention be paid to the following points: 1. The nature of the injury. 2. The time when the swelling appeared. 3. The character of the swelling. 4. The pain.

If a person sustain an injury to the knee, followed by swelling of the joint, it might be well to ascertain if there existed, prior to the injury, a hydrarthrosis, or any other form of enlargement. If swelling follow rapidly the receipt of an injury to a normal knee-joint, and this be limited to the synovial sac, as will be indicated by swelling of the pouch under the quadriceps muscle, and floating of the patella, he thinks the case may safely be diagnosed as one of hæmarthrosis.

He has noticed that very often there is but little pain on manipulation, sometimes there is no pain; the rule is, the pain is not severe. Very frequently accompanying hæmarthrosis there is a smart attack of synovitis. If the case has not been seen early, and there is no satisfactory history, it is difficult to determine which condition predominates. The doubt, however, will be cleared up by the progress of the case. If the case be one of synovitis alone, the swelling disappears under appropriate treatment; if it be due to blood in the joint, the pain and inflammation may disappear, but the swelling will remain. These facts were well established in some of his cases. Even without a history of enlargement rapidly following injury, if the swelling persist, and be not accompanied with much pain, one usually finds it to be due to the presence of blood in the articulation. Its distinctive characters, as compared with synovitis, are these:

Hæmarthrosis.

Swelling rapidly following injury.
No heat; little, if any, pain.
Joint can be moved.
Absence of fever.
Swelling does not subside under ordinary treatment, or does so only to a moderate extent.

Synovitis.

Swelling after a varying interval.
Heat and pain.
Joint usually fixed.
Fever, more or less.
Swelling subsides under appropriate treatment.

Regarding the treatment of this affection, those surgical text-books that take any notice of it, direct that the case should be treated with the view of promoting absorption of the effused fluid. Since he gave this subject consideration, and gained any experience in connection with it, Mr. Fagan says, without hesitation, that the proper treatment of the affection is to remove at once the fluid by puncture of the joint; by this means the foreign body is immediately got rid of, thereby preventing the possible train of serious symptoms that might follow its presence in the joint.

Up to the present time, he has treated fifteen cases in this manner, using the aspirator two or three times in the same case, and on no occasion has it been followed by the slightest unpleasant result. The way in which he carries out this treatment is to puncture the joint with the large needle of the aspirator, a little above and to the outer or inner side of the patella, whichever is more prominent; the needle is then directed obliquely under the patella. After the fluid is completely removed, he places a small pad of lint, saturated in friar's balsam, over the point of puncture, puts a bandage firmly round the joint, places the limb on a back-splint, and applies ice-bags. After a few days, if the swelling does not entirely disappear, he punctures again; and unless the case be complicated with some other form of injury, the joint is usually restored to its normal condition within a fortnight or three weeks.

Puncture of the knee-joint was looked upon as a hazardous practice some years ago. Now it is of frequent occurrence, and in the proper cases is followed with the most satisfactory results; and he expects that, after a little time, opening the joint to dispose of coagula that cannot be got rid of by the aspirator will be more frequently practised, and that this heroic but rational mode of treatment will cause less anxiety than puncturing did a few years ago.—*British Med. Journ.*, September 22, 1883.

VARIATIONS OF THE CHLORIDES IN DISEASES.—DR. BUROT read a paper on this subject before the late meeting of the French Association for the Advancement of Science, in which he showed a rapid method for estimating the quantity of the chlorides (the common method with nitrate of silver solution). Instead of using the graduated burette, the precipitating glass, and pipette, Burot inserts a tube, the extremity of which is in the form of a bowl, holding one cubic centimetre of urine. The urine is decanted and a small quantity of a solution of chromate of potash is added.

A burette, graduated in tenths of a centimetre, is used for decanting the solution of nitrate of silver. Each division corresponds to grs. xv of the chlorides per litre. The end of the reaction is indicated by the coffee and milk color due to chromate of silver.

Burot's observations lead him to admit eleven grammes of chlorides per litre as the normal, ten grammes being chloride of sodium, and one chloride of potassium. This proportion will vary, however, with the elimination, and with the causes which increase or diminish the secretory activity of the kidneys. It also varies in different states of disease. Diminution of the chlorides is important in view of the practical deductions which may be drawn from it. In chronic diseases, diminution only indicates feebleness of the digestive powers, unless there exists some other means of elimination, as diarrhœa, dropsy, etc.

In acute diseases, the diminution is proportional to the intensity of the disease, and the disappearance of the chlorides announces the presence of serous effusions or inflammatory exudations.—*Gaz. Méd. de Paris*, No. 35, 1883.

Acute Gonorrhœal Rheumatism.—In a paper on this subject in *Guy's Hospital Reports*, vol. xli., Mr. J. N. C. Davies-Colley suggests that there are several distinct affections confused together under the name gonorrhœal rheumatism, which he enumerates as follows:

1. *Gonorrhœal synovitis*, a chronic affection, occurring in the male, generally in the knee-joints. Very rarely it is acute, and goes on to suppuration.

2. *Gonorrhœal arthritis*, an acute affection, occurring in the female quite as often as in the male; as a rule, attacking at the outset several joints, and afterwards confined to one, most frequently the elbow-joint, affecting especially the fibrous tissues of the joint, and only secondarily the synovial membrane and cartilages.

3. *Gonorrhœal inflammation of fibrous structures not connected with the joints, e.g.*, the plantar fascia, sclerotic, iris, the peri- and endocardium; this gonorrhœal inflammation of the plantar fascia sometimes occurs in the acute form. Inflammation of the first three structures usually occurs in connection with chronic gonorrhœal synovitis. In the last two situations inflammations seem to be generally associated with gonorrhœal arthritis.

With regard to the second class, he says:

1. It usually occurs during the acute stage of gonorrhœa, or some purulent discharge from the genital organs, in adult patients under middle age.

2. It occurs as often in females as in males, if not more often. Of twelve cases recorded by the writer, nine were in females.

3. It may attack any joint, but most often the elbow-joint. Eight of the writer's twelve cases were in the elbow.

4. At first it attacks several joints, like acute rheumatism, and then confines itself, as a rule, to one.

5. Its seat is the fibrous tissue of the joint. There are great œdema, redness, pain, and tenderness. The ligaments are softened, and the cartilage may be disorganized. There is but little synovial effusion, and constitutional disturbance is but slight.

6. It may be confounded at first with acute rheumatism, later on with phlegmonous erysipelas, bursitis, lymphangitis, phlebitis, gout, and pulpy disease of the synovial membrane.

7. It rarely, if ever, suppurates, but is especially prone to set up fibrous anchylosis.

8. The best treatment is to cure the discharge, keep the joint perfectly still, and apply uniform pressure as long as the acute stage lasts, and then to use passive motion.

Floating Kidney.—Prof. Senator's conclusions recently published in the *Charité Annalen*, based upon the records of thirty-two cases, agree in almost every particular with those to be found in Landau's *Wanderniere der Frauen*. Senator terms the affection "ectopia renis." He found 1 in every 139 sick women to be subject to floating kidney, independently of age or social station. Disappearance of the fat around the capsule of the kidney can hardly be a cause of this condition, for there is little or no such fat in children, amongst whom floating kidney is very rare, and men are as liable to emaciation as women, yet floating kidney is much less frequent amongst men than in women. The absence of fat, as Senator most pertinently observes, does not cause floating kidney, but facilitates diagnosis. The causes are more probably to be found in the condition of the generative organs and defects of attire. Repeated pregnancy, causing pendulous abdomen, is a very probable cause; and uterine displacements are considered by Landau to influence the position of the kidney. The same authority attributes displacement of the kidney to tumors and hydronephrosis, but Senator has never observed these pathological conditions in any of his cases. Tight-lacing is considered as a highly probable cause of floating kidney, as Mr. Clement Lucas observes in his paper on surgical diseases of the kidney, published in this week's *Journal*, and would account for the greater frequency of displacement of the right kidney, which, in a tight-lacing woman, is subject to prolonged pressure by a large solid body, the liver. The greater length of the right renal artery favors displacement of the right kidney. To make diagnosis as certain as possible, the patient should first be placed on her back; the abdominal walls must then be thoroughly relaxed by passive elevation of the lower extremities. In examining the right lumbar region, the surgeon or physician should stand on the same side, and place the left hand on the loin posteriorly, and the right on the abdomen; in examining the opposite side, these tactics must be reversed. Prof. Senator appears to prefer this method to Landau's, for if the medical attendant stand on the opposite side of the patient, with the position of the hands reversed, Senator believes that the displaced organ is more likely to be pushed aside, and thus elude detection.—*Brit. Med. Journ.*, Sept. 29, 1883.

Method of Reduction in Dislocations at the Elbow.—Mr. J. E. Kelley gives the following method for reducing dislocations at the elbow-joint, especially in cases where assistance cannot be readily obtained:

The operator sits on a corner of a table, at the end of which the patient is placed upon a chair. The injured limb is drawn under the surgeon's proximal thigh, which rests, close to the joint, on the anterior surface of the humerus, while the olecranon is accurately placed on the anterior surface of the lower third of the distal femur, and the proximal foot is "hitched" behind the other leg, which is flexed firmly against the frame of the table. In order to obtain the most favorable fulcrum, the surgeon fixes his proximal elbow against the antero-internal aspect of his corresponding thigh, and, grasping the wrist of the patient with both his hands, reduction is effected by the simultaneous and coöperative action of the muscles of the arms, back, and thighs. Fixation and counter-extension are supplied by the powerful thighs of the operator, and coaptation is effected, with great nicety, by the backward pressure of the proximal femur against the anterior surface of the humerus, while the distal femur forces the olecranon forwards. Owing to the accuracy with which it can be applied, this power, which is incalculably greater than that afforded by the pressure of the fingers and thumbs (Boyer), is sufficient, when the forearm is steadied, to reduce an ordinary dislocation without the aid of extension. Additional adjusting influence is exercised by the inner side of the proximal thigh, which, by pressing against the anterior surface of the forearm, liberates the coronoid process from its position behind the lower extremity of the humerus, and allows the greater sigmoid cavity to resume its normal relation to the trochlea. Extension is supplied by the muscles of the upper extremities acting round the fixed point provided by the elbow of the surgeon, and, when his body is thrown backwards, additional force is derived from the muscles of the back, the glutæi, and the other extensors of the thighs. This power may be applied at various angles in rapid and easy succession, an advantage which the surgeon experienced in the treatment of dislocations cannot fail to appreciate.

In the lateral modifications of the posterior luxations the reduction is generally effected by the same manœuvre which is employed for the simple form of dislocation, but should special coaptation be necessary, it is at the disposal of the operator, as, when aided by the powerful constraining pressure of the thighs, the proximal hand can supply sufficient traction and stability, while the other is unoccupied and in the most advantageous position to apply any additional manipulation, which may, if desirable, be afforded by an assistant. If the condition be such that the full extending force of both arms be required, the isolated rural surgeon can, with a little ingenuity, render himself independent of professional aid by fixing the bone of the arm or forearm, which is displaced inwards, by a bandage passing round his own loins, and by making lateral traction on the bone or bones displaced outwards, by another bandage attached to his foot, and passing over his knee, as over a pulley. By this simple apparatus the instinctive movements, which are essential to the reduction of the simpler luxations, are utilized for the treatment of the more complicated forms.—*Dublin Journ. Med. Science*, July, 1883.

Extirpation of the Kidney.—M. Ollier has performed this operation three times. In the first case, the operation was performed on account of pyonephrosis in a young woman, believed to be due to obstruction of the pelvis of the kidney by calculi. The extirpation was rendered difficult by adhesions of the capsule to the adjacent parts, and it was found necessary to decorticate the organ. Though the operation was long and tedious there were no untoward symptoms, and the patient recovered. The patient now complains of pain in the liver and left iliac fossa, and at two periods there has been excessive salivation, amounting to more than a quart in half a day.

The second operation was performed on account of a cyst containing about four gallons of fluid. The patient died on the third day.

The third case was one of sarcoma of the kidney. All went well until the tenth day, when the child died suddenly in attempting to raise itself from the bed.—*Gaz. Hebdom.*, No. 36, 1883.

Relations between Diseases of the Abdomen and the Right Heart.—The clinical researches of MM. Potain and Tessier and the recent memoir of M. Rendu, on this subject, are already familiar to many. Passerini now adduces a new confirmation of the close relations between visceral diseases and the heart. In three cases of peritoneal effusion, a cardaic insufficiency was soon characterized by prolongation of the first sound and augmentation of the second. This sound disappeared after evacuation of the liquid. Paserini considers this as dependent upon ischæmia of the abdominal veins compressed by the liquid, and also upon the obstruction to the thoracic veins. This explanation is confirmed by Larcher and Depaul, who have observed prolongation and augmentation of the first sound in pregnant women. Ovarian cysts and large tumors of the abdomen are sometimes accompanied by the same phenomenon. It seems, then, that it can be produced by mechanical compression of the abdomen.—*Gaz. Hebdom.*, No. 36, 1883.

Treatment of Phthisis.—Dr. E. P. Hurd, of Newburyport, Mass., in the *Boston Medical and Surgical Journal* (September 20, 1883), discusses the medicinal treatment of phthisis under the three heads of (I.) the germicide treatment, (II.) the constitutional treatment, (III.) the symptom treatment.

As regards the first, he says it would be presumptuous scepticism to gainsay all the testimony in support of this direct medication. Some benefit is doubtless often derived; the cough is allayed, local congestions arrested, putrefaction of the bronchial secretions prevented, and respiration facilitated. There is, however, no evidence that inhalations, sprays, atomizations, or fumigations have any efficacy in destroying the micro-organisms whose multiplication and whose ravages are supposed to be such important *secondary* factors in the disease. He says *secondary*, for he looks upon the constitutional diathesis as of *primary* importance. If the soil be not first fit for the bacillus, it will not find a habitat there. If it be *fit*, there is no direct medication known to science which will prevent the development, growth, and multiplication of the parasite. It cannot, then, be too strongly urged that the hygienic and tonic medication constitutes the best germicide medication, and that pure, dry, bracing out-door air is the best antiseptic.

The constitutional treatment of phthisis comprises all those remedial agents which assist nutrition and promote systemic vigor. Chief among these are cod-liver oil, the phosphates and hypophosphites, bitter tonics, alcohol, and arsenic.

He has seen the best results from the oil when large quantities were taken, say four or five ounces a day. In whatever stage of the disease, where cod-liver oil is well supported, amelioration always attends its use. Unfortunately, however, in this stage of softening, and in febrile conditions, it is, as a rule, not borne.

Of the various emulsions in the market, he has had the best success with that of Phillips', which certainly contains the oil globules in a very minute state of division. He has seen this emulsion taken with benefit—and for a long time—by patients with delicate stomachs which revolted against the pure oil.

As regards the hypophosphites and phosphates in phthisis, there is probably nothing specific about them. Alone they have never cured and never can cure consumption. They doubtless have an important subordinate place in the therapeusis of this disease, aiding nutrition, and possibly being appropriated, to some small extent, in supplying the waste of the organic phosphorus compounds.

Lumbricus in the Liver.—Dr. Oks, of Rasgrad, Bulgaria, describes in *Vratsch*, the case of an almost moribund phthisical patient, who was seized with vomiting and icterus. The liver was much enlarged. After death, the usual appearances of advanced phthisis were discovered. All the biliary ducts were dilated, and the common duct was occupied by a large female lumbricus; one extremity of its body hung free into the duodenum. Deep in the substance of the liver a smaller male lumbricus was found, impacted in a biliary duct. This is a rare, but not entirely unknown, complication of a parasitic disease.—*British Medical Journal*, September 29, 1883.

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SATURDAY, OCTOBER 20, 1883.

FORMS AND TREATMENT OF ANGINA PECTORIS.

Dr. Henri Huchard, in the course of an elaborate disquisition on "Angina Pectoris" ("Des Angines de Poitrine," *Revue de Médecine*, August, 1883), classifies the several pathogenetic influences in five groups: The organic form; the nervous; the reflex; the diathesic; and the toxic. These causal conditions admitted, the therapeutical indications are at once manifest. It may be well to clear the ground by a proper definition of the pathogeny of each class.

By the organic form is meant an ischæmia of the heart-muscle, the result of calcification and narrowing, or complete obstruction of the coronary artery. The nervous form is that condition of the cardiac nervous mechanism which has its origin in the state of the nervous system accompanying hysteria, neurasthenia, hypochondria, exophthalmic goitre, and in the masked epilepsy which assumes the objective type of angina pectoris. The reflex form, as the term implies, is a disturbance at some point in the sphere of distribution of the pneumogastric nerve, reflected over its cardiac branches. Irritation of the peripheral nerves at other points may, under some circumstances, be referred to the heart, and induce paroxysms of angina pectoris. The examples of diathesic origin occur in gout, rheumatism, diabetes, and syphilis. Lastly, the toxic cases are caused by the abuse of tobacco, tea, coffee, and, indirectly, of alcohol, etc.

If the limits of the pathogenetic influences inducing angina pectoris be enlarged to include all the factors above mentioned, the severe definition heretofore given of the malady must be correspondingly modified. An entirely functional state must be admitted to exist, and, indeed, must be regarded as relatively and actually of more frequent occurrence. That form characterized as organic, in which various morbid conditions of the heart exist, are by Huchard entitled *true* angina pectoris, and the functional disorders *false* angina pectoris. The former is the malady described by Heberden, Fothergill, Stokes, and other classical English authorities.

In few maladies are the improvements in our therapeutical resources more conspicuous. In the use of the most effective remedy for the relief of the paroxysm, an admirable illustration is given of the remarkable value of the contributions made to therapeutics by physiological investigations. We refer to the use of the amyl nitrite in this affection—an addition to scientific medicine which we owe to Dr. Lauder Brunton. Remarking the high tension of the vessels in certain cases of angina pectoris, Dr. Brunton made the fortunate deduction that this condition might be quickly relieved by amyl nitrite, which promptly lowers vascular tension. All the world knows how completely successful the expedient has proved in actual practice. This explanation of the relief afforded by the remedy is not universally admitted. For example, Filehne holds that the relief is due to paresis of the vagus, and Dr. George Johnson that the arrest of the pain in the cardiac nerves is the real factor, the rise in the vascular pressure being secondary to this pain, since the same result follows from irritation of the sensory nerves in any part of the body. Huchard offers an explanation of the good effects of amyl nitrite which seems to us eminently satisfactory. He thinks that the remedy acts by increasing the circulation in the cardiac muscle, which is much impeded by spasm or calcareous changes in the coronary artery, and that it lessens the work of the heart by dilating the peripheral vessels. Not all cases of angina pectoris are accompanied by peripheral vascular spasm, and hence this explanation will not satisfy all the requirements of a perfect theory.

If the curative effect of amyl nitrite is not explicable in a satisfactory manner, its value is none the less firmly established, although failures have been reported. The most facile mode of inhalation is by means of delicate glass vesicles—perls—which may be broken in a handkerchief and readily inhaled with slight loss. Nitroglycerine corresponds in action, and may, therefore, be substituted in some forms of the malady. It is less prompt, and the susceptibility to its action is so varied that some preliminary trials are necessary to determine the proper dose. Whilst nitroglycerine is much inferior to amyl nitrite for the relief of the paroxysms, it has a very important place as a remedy in those cases of the functional disorder characterized by repeated seizures at short intervals.

The remedy next in importance is morphine subcutaneously. Huchard maintains the thesis that morphine diminishes the contractile energy of the heart, and lessens the vascular tension by dilating the peripheral vessels. Not to mention the mass of opinion in opposition to this view, it will suffice to give the observations of Schüller, who studied the effects of morphine on the vessels of the pia-mater *in situ*, and ascertained that this agent first, and briefly, dilates the vessels, but this is soon followed by decided contraction. The unquestionable good effects of morphine in angina pectoris must, therefore, be sought on other grounds. The two chief reasons for its utility are the relief of pain, and the slowing of the heart movements, permitting a more abundant supply of blood to the heart muscle. The best results in the severest cases, are said to be had from a combination of these remedies by the inhalation of amyl nitrite and the subcutaneous injection of morphine.

When the heart's action is very feeble, as appears to be the condition of the organ in some examples of angina pectoris, the subcutaneous injection of ether, and the intravenous injection of ammonia, are highly useful. In such cases, also, atropine may render important service. The inhalation of ethyl bromide, cautiously carried on, may also prove in a high degree efficacious. This agent has also been employed with excellent results, by the hypodermatic method, in place of ether.

With the means now at our disposal, the treatment of the paroxysms of angina pectoris is most effective. It is, however, more desirable to prevent the attacks. This fortunate result may be attained by the adaptation of remedies to the various pathogenetic conditions. Have we to deal with true angina pectoris—with the organic form? Are there also at work in the causation of the attacks any of those influences concerned in the production of the pseudo affections? Is there a nervous, a diathesic, a toxic, or a reflex element added to the existing organic basis of the seizures? It would seem needless to assert that all causes of disturbance included under these heads, and all unfavorable hygienic influences of every kind, should be withdrawn. Our space will only permit some references to the remedies properly so-called. As in the organic form the condition of chronic arteritis is the chief source of mischief, it becomes exceedingly important to arrest the progress of this destructive change. None of the measures hitherto proposed, unless the treatment by carbonate of soda—the suggestion long ago made by Bretonneau is an exception—has exercised any remedial influence. We are, therefore, fully aware of the assumption involved in our recommendation, of the carbonate and iodide of ammonium given conjointly with cod-liver oil as the most effective treatment for chronic endarteritis. Huchard concludes that the iodide of potassium or sodium is entitled to rank first as a preventive remedy, and he gives the details of six cases illustrating the remarkable value of this plan of medication. We prefer, to the iodides alone, the combination above referred to, for the following reasons: In chronic endarteritis, when the structural changes in the walls of the vessel encroach materially on the lumen, and retard the blood-current, fibrinous deposits take place, and finally thrombi form. The persistent administration of ammonia is the most effective means of preventing these formations by maintaining the alkalinity of the blood. The iodides contribute to this result. Cod-liver oil with the iodides is probably the best remedy for chronic endarteritis. Besides, by improving the nutrition generally, it tends to give stability to nervous matter. *Sanguis moderator nervorum* is an aphorism of Hippocrates. Arsenic serves a double purpose: as a means of stimulating the nutritive functions and as a moderator of reflex excitability. We have seen cases in which it gave more sustained relief than any other remedy. Under such circumstances, enormous doses are taken with impunity. An apparent tolerance is established, and the large doses, so far from causing gastric disturbance, increase the appetite, improve the nutrition, and induce a condition of mental comfort comparable to that of a favorably acting narcotic. With this mental quietude coincides a calm state of the reflex excitability.

It is in the office of a preventive remedy that nitroglycerine serves so important a purpose. It should be given daily, to maintain the state of diminished vascular pressure. Iodide and bromide of ethyl by inhalation, in quantity far short of that necessary to cause anæsthesia, may also be used daily when attacks are frequent. The bromides also have an important function when reflex excitability is to be moderated.

The diathesic and toxic cases are improved or cured by the removal of the causes, and by treatment addressed to the functional nervous disturbance resulting therefrom.

KNEE-HÆMARTHROSIS.

IN a paper read at the recent meeting of the British Medical Association, and published in the *British Medical Journal*, of September 22, MR. JOHN FAGAN, of Belfast, calls attention to the nature, diagnosis, and treatment of knee-hæmarthrosis, which, he asserts, is not noticed in surgical textbooks as an independent affection, and if mentioned as a complication of fracture or some other serious injury, there is no special guidance to its diagnosis and therapeutics. An idea of the comparative frequency of the lesion may be formed when it is stated that it has been observed in one of the hospitals with which Mr. Fagan is connected, and which contains about eighty surgical beds, twenty times during the past five years.

Extravasation of blood into the knee-joint may be caused by sudden muscular strains, severe contusions, and wrenches of the articulation, through which the mucous ligament and other vascular fringes are lacerated. This form of the complaint constitutes the typical, uncomplicated variety of the lesion, and is of rare occurrence. Another and more frequent form is associated with serious injury to the joint, and varies in degree from a simple fracture of the patella or a fissured fracture of the femur into the articulation, to that of a compound fracture or dislocation, being in the last two events only of secondary importance. In certain forms of the simple fractures mentioned, the fragments remain in close apposition, and the blood is retained in the synovial cavity, through which the lesion belongs virtually to the typical variety. When, however, the fragments are widely separated, or there is much laceration of the synovial membrane, blood is effused both within and without the sac, and, while this condition modifies the symptoms and prognosis, it does not change the mode of treatment.

In all cases of uncomplicated hæmarthrosis, the blood remains fluid for an indefinite period, and in one case of fractured patella and in one of fracture of the lower end of the femur into the joint, fluid blood was aspirated, respectively, in four days and fourteen days after the injury. Absorption of the blood, when it forms the bulk of the swelling, is rarely met with; hence it is useless to institute a plan of treatment directed to that end.

The diagnosis of the affection is not difficult, and is based upon the following points: Swelling rapidly following an injury to the normal knee-joint, and limited to the synovial sac, as indicated by enlargement of the pouch under the quadriceps muscle; mobility of the joint; absence of heat and febrile action; little, if any, pain; and resistance to ordinary methods of treatment. In synovitis, the swelling comes on after a varying interval; the joint is usually fixed; heat, pain, and more or less fever are present; and the enlargement subsides under appropriate measures.

The treatment consists in removing the fluid at once with the aspirator, putting a bandage firmly around the joint, placing the limb on a posterior splint, and applying bags of ice. If, in a few days, the swelling do not entirely disappear, the joint should be punctured again. All of the fifteen cases treated in this manner recovered, without an unpleasant symptom, in from two to three weeks.

THE ANTAGONISM BETWEEN PARALDEHYDE AND STRYCHNINE.

IN a recent issue, we called attention to the valuable hypnotic and anodyne qualities of paraldehyde. The Italian PROFESSOR CERVELLO, to whom we owe this new remedy, has continued his researches, and has recently demonstrated an antagonism of action between paraldehyde and strychnine. His research included three forms of procedure: 1. After a dose of strychnine, a non-lethal quantity of paraldehyde was given. 2. After a dose of paraldehyde, a lethal quantity of strychnine was administered. 3. Both agents were simultaneously used. As a control experiment, the same animals were subjected to the effects of these agents alone. In this way a criterion was established by means of which the narcotic power of paraldehyde and the toxic activity of strychnine could be judged. By this method he demonstrated that paraldehyde arrested the action of strychnine, after the manifestations of poisoning began, or prevented the appearance of toxic symptoms. The antagonism was manifested in what order soever these agents were administered, and when they were given together. Cervello ascertained that it is not necessary to the antagonism that the quantity of paraldehyde given should be above the merely physiological limit, a relatively small quantity sufficing to neutralize the effects of a large dose of strychnine. In a rabbit weighing 1665 grammes (about three and a half pounds), four milligrammes of nitrate of strychnine (more than a lethal dose) were injected, and the symptoms of poisoning vanished under the action of a small dose (less than a drachm) of paraldehyde. To another rabbit, narcotized by a drachm nearly of paraldehyde, six milligrammes of nitrate of strychnine were given, and the animal survived. Strychnine appears to have no influence over the course of the narcotizing action exerted by paraldehyde, for the duration of the narcotic effect is practically the same when strychnine has and when it has not been given. There is, however, a difference as to the time when the narcotic effect produced by paraldehyde manifests itself—strychnine retarding the action, but not altering its character. The seat of the opposing actions is the spinal cord, strychnine increasing and paraldehyde lessening the reflex excitability of the gray matter of the medulla oblongata.

LATERAL CLOSURE OF VEIN-WOUNDS.

DURING the past twelvemonth efforts to popularize partial closure of wounds of veins have been made by PROF. BRAUN, of Heidelberg, and DR. L. S. PILCHER, of Brooklyn, whose papers on the subject may be found respectively in vol. xxviii., *Archiv für klin. Chirurgie*, and the *Annals of Anatomy and Surgery*, for August, 1883. In support of their views as to the safety of the measure, they refer to Von Wattmann, Von Walther, Bérard, Denonvilliers, Richet, Follin, Hueter, and Von Linhart.

Lateral closure includes ligation, forcipressure, and suture, of which the first is the most generally applicable. As stated by Braun and Pilcher, it should be reserved for the jugular, subclavian, axillary, and femoral veins; but, as a sufficient number of cases upon which to base positive conclusions as to the comparative safety of lateral and complete closure has been recorded of the internal jugular alone, our remarks will be confined to that vessel.

The internal jugular vein has been tied laterally eighteen times, of which three ended fatally from secondary hemorrhage. The wound has been closed with forceps twice, both of which recovered, but forcipressure was resorted to in one after a lateral ligature had failed to retain its hold. The suture has been employed twice, both having been successes as regards bleeding. Leaving out of the question the four examples of suture and forcipressure, it will be seen that of nineteen lateral deligations three were fatal, and one failed to accomplish the object through the slipping of the thread. Hence the measure was unsuccessful in nearly one case in every five.

The same trunk has been completely included in a ligature upwards of fifty times, without a single death from hemorrhage, and without a single premature detachment of the thread. These facts speak for themselves, and they utterly upset all the sophistic arguments that have been advanced in favor of lateral deligation, which, upon the authority of Malgaigne, Von Langenbeck, Pirogoff, C. O. Weber, Von Mosetig, Rose, Blasius, H. Fischer, Billroth, Bardleben, G. Fischer, Boeckel, Nicaise, Dussutour, Tillaux, the elder and younger Gross, Agnew, Ashhurst, Lidell, and Markoe, should be abolished from practice as a dangerous expedient. The plea entered by Pilcher for the catgut thread is not warranted by experience, and his supporter in other points expressly states that the silk ligature is preferable on account of the greater firmness of its knot and its consequent less liability to slip.

THE CENTENNIAL OF THE HARVARD MEDICAL SCHOOL.

In 1783, one hundred years ago, John Warren, Benjamin Waterhouse, and Aaron Dexter founded the Medical School of Harvard University. Last Wednesday the Centennial Anniversary of this occasion was appropriately celebrated, and by a happy coincidence at the same time the University dedicated to its service the most beautiful and thoroughly equipped building, now in use for the purposes of medical education, to be found on this Continent.

The Centennial Oration was delivered by Dr. Oliver Wendell Holmes, who, after many years of faithful service in the Chair of Anatomy, has lately retired from active teaching, and on this occasion, probably for the last time, has made a formal address on medical topics. The oration was carefully prepared, and the large audience, which included representative men from different parts of the country, listened with eager attention to the scintillations of wit which fell from the mouth of the poet-anatomist. The address we present in full to our readers through the generous courtesy of *The Boston Medical and Surgical Journal.*

The celebration was appropriately concluded by the presentation to the University of a portrait of Dr. Holmes and a bust of Dr. Bigelow, who, by their faithful professorial teaching, as well as by their conspicuous contributions to literature and the healing art, have rendered eminent service to the University during a goodly portion of the century which it has now completed.

THE MORBID CHANGES IN MYXŒDEMA.

Very few opportunities have been afforded for the study of the morbid anatomy of myxœdema. The "cretinoid state" of Sir William Gull, the mucoid degeneration of Ord, and the pachydermic cachexia of Charcot rather suggest the cutaneous appearances than throw light on the pathological conditions. Recently M. Henrot, of Rheims (*Le Progrès Médical*, Sept. 15, 1883), has given an account of the appearances in a case observed by him, and as the changes were carefully studied, it may be useful to lay before our readers the more important results of this examination.

M. Henrot emphasizes the fact that there were no alterations in the skin to account for the characteristic appearances. He found in the cerebrum a considerable hypertrophy of the pituitary body and of the pineal gland. The pneumogastric nerves, the glosso-pharyngeal, the brachial plexus, and the ganglia and fibres of the sympathetic had undergone a notable increase in size. Changes also were found in the meninges of the spinal cord comparable to those which occur in chronic alcoholism. M. Henrot hence concludes that myxœdema consists essentially in a return to the embryonic condition of the subcutaneous, submucous, and general connective tissue under the influence of the hypertrophic changes which occur in the sympathetic system and its annexed organs, the pituitary and pineal bodies, leading to the excessive production of mucin, and the infiltration of the affected organs with this material.

SOCIETY PROCEEDINGS.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Thursday Evening, Sept. 13, 1883.

THE PRESIDENT, JAMES TYSON, M.D., IN THE CHAIR.

DR. CHARLES W. DULLES presented a specimen of very large

ULCER OF THE STOMACH, WITH UNUSUAL FEATURES.

The specimen which I have to show you came from the body of a patient of Dr. Edward L. Anderson, who had had Dr. J. H. Musser to see her in consultation during life, and who asked my assistance in making the *post-mortem* examination because of Dr. Musser's temporary absence from the city. To the clinical notes of Dr. Anderson and my notes of the autopsy, Dr. Musser will, no doubt, add his own impressions of the case, which has appeared to me to be of singular interest and instructiveness.

The following are Dr. Anderson's notes:

Mrs. M., aged 35 years, husband living, the mother of five children, one of whom died of stricture of the pyloric or cardiac end of the stomach. Both her parents died before their fiftieth year.

At my first visit, May 12, 1883, she was confined to bed, and stated that since the birth of her last child she had not been well, having more or less dyspepsia and growing steadily worse for the last six months. She complained of a constant burning pain in the region of the stomach, which nothing seemed to relieve. She vomited daily, sometimes immediately after a meal, but often not until evening, when it seemed to her that all the food she had taken during the day would be ejected. The matter vomited was intensely sour, dark, and frothy, having the appearance of yeast. There was always pain after vomiting, and at all times irregular pains over the abdomen. She was anæmic, emaciated, and had a weak but regular pulse. Upon physical exploration I could find no tumor. Her heart and lungs were normal, and, as I afterwards learned, the urine likewise. The abdomen was resonant. She was placed on a milk diet, with pepsin and ten drops of sulphurous acid every three hours. She took two quarts of milk daily, and did not vomit until the twenty-second of May; a period of ten days. On this day she vomited but a small quantity of food. May 23, the period of her menstruation (though not menstruating from April until the time of her death), she ate, on her own responsibility, a fritter for supper. This indiscretion brought on an attack of vomiting and sufficient prostration to occasion considerable alarm to her family and cause them to send for me. I found her much exhausted, only able to speak in monosyllables, with a pulse of one hundred and four, and respiration forty. She complained of intense, burning pain in the stomach. External heat and sulphurous acid internally gave relief. This was the first time I was able to see the vomited matter, and I found it to be digested blood, about two quarts in amount. Dr. J. H. Musser kindly examined the material microscopically and found blood-corpuscles, pus-globules, and epithelial cells. I was told that she had vomited similar material prior to my first visit. The vomiting was repeated on May 25, 26, 27, and 28, and several times there were free hemorrhages. She was treated with bismuth and carbolic acid, with enemata of milk, whiskey and eggs, and inunctions of cod-liver oil. Hemorrhages occurred again on June 6, 7, and 8. On June 10, Dr. J. H. Musser saw the case in consultation; he thought he detected a tumor. We came to no positive diagnosis, but wavered between carcinoma and ulcer. It was only when the patient was placed in the knee-elbow position that a tumor could be felt, and this a little to the right of the median line. The treatment was changed to one drop of hamamelis every twenty minutes, and a pill containing one-quarter of a grain of oxide of silver three times daily. June 17 and 18, hemorrhages again occurred, but from this time until her death, about six weeks later, there were no more hemorrhages, little inclination to vomit, and very little pain. This was notwithstanding the fact that, I have reason to believe, for about a month before her death she paid no particular attention to her diet, while the only part of the treatment carried out was the taking of the oxide of silver pill. About three weeks before her death a troublesome cough set in, but it was easily controlled by opium. Her death followed a large meal and free draughts of coffee and water. The act of death was quiet and gradual, unaccompanied by pain or alarm.

Autopsy.—Sept. 2, 1883. Body of Mrs. M., aged 35; thirty hours after death; rigor mortis absent; body much emaciated; right hand puffy with œdema; bruise over middle of right shin. Examination of thorax, abdomen, and pelvis.

There was no fluid in either pleural cavity. Both lungs were attached at the upper part to the parietal pleura, by adhesions which broke down easily. The upper lobe of each lung was pretty well solidified with chronic catarrhal deposits, and quite soft. In each upper lobe there was a cavity. That in the right lung was as large as a hen's egg; that in the left about the size of a pigeon's egg. Both were ragged, and contained dirty grayish detritus. The lower lobes of both lungs contained a number of small nodules of caseous degeneration.

The heart was very small and firm, about the size of a goose-egg. Its valves were normal, and it contained but a small quantity of fluid blood in its right cavity.

The abdomen contained about a third of a pint of slightly turbid serous fluid. There was not the slightest injection of the peritoneum anywhere, nor any other evidence of peritonitis. The pelvic organs were all normal in appearance, except the uterus, which, though of normal size, was in a state of marked retroflexion. The bladder contained about two fluidounces of urine. There was no omental apron. The liver was of normal size and appearance. The gall-bladder was normal in appearance, and contained about half a fluidounce of saffron-colored bile, but no gall-stones. The spleen was normal. The kidneys were of normal size, rather hard, their capsules adherent, their surfaces a little granular. On section, their cortex was found somewhat diminished. The suprarenal capsules were very tough, the right more so than the left. The pancreas was of normal appearance at its left end, but at its right it was attached to the stomach, and was decidedly indurated. Here it was imbedded in a quantity of delicate adhesive bands, which united into a bundle its own duct, the end of the ductus communis choledochus, and the pyloric end of the stomach. The intestines were collapsed and empty, except the duodenum, which contained a small quantity of thick, bile-stained chyme.

The stomach itself presented the features of the greatest interest. It was much enlarged by dilatation; its walls were thin and pale; its vessels along the greater curvature much enlarged and full of dark blood. It occupied a standing position from above downwards, and from left to right. It contained about *two quarts* of grumous, sour-smelling fluid ingesta, and with this it was not nearly filled. At the upper part of the pyloric entrance it bore a firm, puckered induration, looking like a cicatrix, about two-thirds of an inch in diameter. Close by this was a large ulcer, about two and a half inches long, and over an inch wide, with indurated, thickened, and in part perpendicular edges. This ulcer passed through all the coats of the stomach; nevertheless, the large quantity of fluid contents of this viscus had not escaped from its cavity because the ulcerated part of the stomach was applied against the adjacent pancreas and attached to it by adhesions. This attachment, however was extremely delicate, and would not bear the gentlest handling; it gave way while the viscera were still in the abdomen, upon an attempt being made to lift the pancreas up, while the stomach was held aside. This disclosed what seemed to be a loose connective-tissue mesh between the stomach and pancreas, in which a small quantity of the ingesta was found.

The pyloric orifice of the stomach was at the edge of the induration surrounding the ulcer, and it was so contracted as to barely admit the passage of a grooved director through it.

Dr. Henry M. Fisher presented a case of

TUBERCULAR ULCERATION OF THE INTESTINE, WITH TUBERCULAR INFILTRATION OF THE LUNGS AND SPLEEN.

E. H., æt. 43, married, was admitted to the Episcopal Hospital July 16, 1883. The following notes were taken by Dr. George M. Boyd, the resident physician:

The patient states that she has been sick since last April. Her trouble began with vomiting and purging, which it seemed impossible to check. No cough was complained of, and there appeared, on admission, to be no marked dulness in percussion over either lung, but, in consequence of the patient's statements, a careful physical examination of the lungs was not made. She was very pale and much emaciated. At first, almost all nourishment was rejected, but after a few days the stomach became more tolerant of ingesta.

Pain was complained of in the left inguinal region, where there seemed to be an undue degree of fulness; but the pain was relieved by poulticing, and the diarrhœa was relieved to a certain extent by opium and astringents. Four or five thin, dark, and watery passages occurred every twenty-four hours, in spite of treatment. Sometimes small clots and shreds of coagulated blood were seen in the passages.

The diarrhœa became again more profuse, and the emaciation more extreme. About a week before her death the patient began to complain of cough, and auscultation then revealed tubular breathing and gurgling below the right clavicle.

Death occurred on August 30th. The post-mortem examination was made fifteen hours after death. Rigor mortis hardly yet well established. The body is extremely emaciated, the omentum being almost destitute of fat.

Heart: Weight four ounces; tissue pale.

The apices of both lungs present numerous cheesy nodules, with catarrhal pneumonic thickening. The right lung presents at its apex a cavity with smooth walls of the size of a pigeon's egg.

Spleen: Weight, two and a half ounces; its section shows numerous cheesy nodules.

Left kidney: Weight, two ounces; capsule adherent, and cortex diminished. Right kidney: Weight, four ounces.

Liver fatty.

Small intestine almost empty and contracted; its mucous surface is everywhere injected, and about eighteen inches from the ileo-cæcal valve it presents two or three small round ulcerations, which do not penetrate quite to the peritoneal investment. Mesenteric glands everywhere swollen, and veins dilated. The large intestine presents throughout its entire extent thickening of its submucous layer and other indications of chronic inflammation. The inflammation has caused in the descending and a portion of the transverse colon complete, or almost complete destruction of the mucous membrane for a space of about three feet. The muscular layers are thickened, and the mesenteric glands swollen, and there is some thickening and undue opacity of the walls of the vessels, but no tubercular granulation can be detected with the naked eye.

Dr. Fisher also presented a

CASE OF CANCER OF THE LIVER.

The patient, S. A., æt. 65, single, was admitted to the Episcopal Hospital July 31, 1883.

The following notes were made by Dr. Claxton, the resident physician: While at work, six weeks ago, the patient began to experience pain in the epigastric and right hypochondriac regions. Two weeks later, he noticed that he was jaundiced, and that there was a lump (or swelling) in his abdomen.

Upon admission to the hospital, the patient was much emaciated and very feeble; skin and conjunctivæ intensely jaundiced, of a deep saffron hue.

There was marked bulging noticed in the right hypochondriac and epigastric regions. The tumor, which could be plainly felt through the thin abdominal wall, was found to extend four inches below the xiphoid cartilage and two inches to the left of the linea alba.

The mass occupying the right hypochondriac region was found to be distinctly nodulated and very hard. Some of the nodules appeared to be umbilicated. The patient presented a markedly cachectic appearance; tongue thickly coated with a dirty yellowish-brown fur; his bowels were constipated, and there was anorexia.

Purgation failed to influence the size of the tumor. The patient complained of insomnia, but did not seem to suffer much. Mental action was sluggish. The patient became rapidly weaker, and for fully a week before his death it was noticed that his extremities were very cold and full. Three days before his death his pulse had become so weak as to seem almost imperceptible. Death occurred on August 16th.

The post-mortem examination was necessarily hasty, as the body was removed from the hospital within two hours after the patient's death. The new growths appeared to involve, however, only the liver and the pancreas. The common bile-duct was completely occluded by a hard nodular mass, which had its apparent origin in the pancreas. Above the occlusión the cystic duct and the gall-bladder were distended with dark, olive-green bile. The liver weighed five pounds six and a half ounces. Section of the organ showed complete infiltration with cancer nodules, and little or no normal hepatic tissue could be seen. The spleen was markedly atrophic, weighing one and a half ounce. The kidneys were deeply stained with bile, and seemed somewhat contracted. The heart was very small, and its muscular tissue flabby.

OBITUARY RECORD.

Brigadier-General Charles H. Crane, M.D.,

SURGEON-GENERAL U. S. ARMY.

In our last issue, we gave a short notice of the death of Surgeon-General Charles H. Crane, U. S. Army, which took place at his residence, in Washington, D. C., on the morning of October 10, 1883, in the fifty-ninth year of his age. He had been suffering for several weeks with an abscess near the root of the tongue, which had opened and formed an ulcer which extended forwards. The immediate cause of death was hemorrhage from perforation of one of the lingual arteries.

General Crane was the son of Colonel Ichabod B. Crane, of the First U. S. Artillery, and was born in Rhode Island, July 19, 1825. He graduated in Arts, at Yale College, in 1844, and received the degree of Doctor in Medicine at Harvard, in 1847. He at once entered the army, being appointed an Acting Assistant Surgeon the same year, and commissioned as Assistant Surgeon on February 14, 1848.

He served with the Second U. S. Artillery in the Mexican War, and was also in the Florida War. At the close of this, he went to the Pacific Coast, where he remained on duty until the end of 1856; was then transferred to New York City, where he remained, as Attending Surgeon, examining recruits, and as Assistant to the Medical Purveyor, until 1859; accompanied General Scott to the Pacific Coast, September, 1859; was promoted to a Surgeoncy in May, 1861; Medical Director, Department of the South, to July, 1863; in the Surgeon-General's Office until appointed Assistant Surgeon-General, in July, 1866; Brevet Brigadier-General for faithful and meritorious services during the war, and appointed Surgeon-General July 3, 1882. He leaves a wife and one son.

General Crane was greatly esteemed by those who were intimate with him, these being mostly the older officers of the army. He was an excellent executive and administrative officer, and his sudden and untimely death is a heavy loss to the Department.

The following circular has been issued from the Headquarters of the Army:

General Orders, No. 70.

Headquarters of the Army,
Adjutant-General's Office,
Washington, October 10, 1883.

The following order has been received from the War Department:

It is with regret the Secretary of War announces to the Army the decease of Surgeon-General Charles H. Crane, who died at his residence, in this city, at 6 o'clock A.M. to-day.

General Crane was appointed Acting Assistant Surgeon in November, 1847, and his first duty was to accompany a detachment of recruits to join the army in Mexico. He was appointed Assistant Surgeon February 14, 1848, and served with the Second and Fourth Artillery in Mexico and Florida.

In 1852, he was ordered to the Pacific Coast, where he took part in several expeditions against hostile Indians, rendering distinguished service in an expedition against the Indians near Rogue River, Oregon, in 1856. From December, 1856, to January, 1862, he was Attending Surgeon and Assistant to the Medical Purveyor at New York City. In 1859, he accompanied General Scott in his diplomatic mission to the Pacific Coast. He was promoted Major and Surgeon May 21, 1861. On duty as Medical Director, Department of Key West, Florida, and Medical Director, Department of the South, to July, 1863; and Medical Inspector of Prisoners of War in August and September, 1863. From September, 1863, he was on duty as executive officer in the Office of the Surgeon-General; promoted Colonel and Assistant Surgeon-General July 28, 1866, and appointed Brigadier-General and Surgeon-General on July 3, 1882.

General Crane received the brevets of Lieutenant-Colonel, Colonel, and Brigadier-General for faithful and meritorious services during the War of the Rebellion.

The foregoing notation of the long and faithful service of General Crane simply formulates his official record as an honorable and distinguished officer of the Army. In the hearts of his many friends another record exists — the outgrowth of his manly worth, earnest devotion to duty, fidelity in friendship, and generous sympathies — that will serve to keep his memory cherished so long as one remains.

The officers of the Medical Department will wear the usual badge of mourning for six months.

By command of General Sherman.

NEWS ITEMS.

BOSTON.

CELEBRATION OF THE ONE HUNDREDTH ANNIVERSARY OF THE FOUNDATION OF THE MEDICAL SCHOOL OF HARVARD UNIVERSITY, AND DEDICATION OF ITS NEW BUILDING, OCTOBER 17, 1883.

(Specially reported for The Medical News.)

The Centennial exercises were begun at eleven o'clock in Huntington Hall, Massachusetts Institute of Technology, in the presence of a large audience.

President Eliot said:

Ladies and Gentlemen: We are met to celebrate the beginning of the second century of the medical school's existence, and the simultaneous completion of its new building.

It is a hundred years since John Warren, Benjamin Waterhouse, and Aaron Dexter were installed as Professors of Anatomy and Surgery, Theory and Practice, and Materia Medica, respectively, and without the aid of collections or hospitals, began to lecture in some small, rough rooms in the basement of Harvard Hall, and in a part of little Holden Chapel at Cambridge. From that modest beginning, the school has gradually grown until it counts a staff of forty-seven teachers—ten professors, six assistant professors, nine instructors, thirteen clinical instructors, and nine assistants working in the spacious and well-equipped building which we are shortly to inspect, and commanding every means of instruction and research which laboratories, dispensaries, and hospitals can supply.

Out of our present strength and abundance, we look back to the founding of the school, and its slow and painful development. We bear in our hearts the three generations of the teachers who have served this school with disinterested diligence and zeal. We recall their unrequited labors, their frequent anxieties and conflicts, and their unfulfilled hopes; we bring to mind the careful plantings and the tardy harvests reaped at last, but not by them that sowed.

We meet, indeed, to rejoice in present prosperity and fair prospects, but we would first salute our predecessors, and think with reverence and gratitude of their toils and sacrifices, the best fruits of which our generation has inherited.

The medical faculty of to-day have strong grounds for satisfaction in the present state of the school; for they have made great changes in its general plan and policy, run serious risks, received hearty support from the profession and the community, and now see their efforts crowned with substantial success. By doubling the required period of study in each year of the course, instituting an admission examination, strengthening the examinations at the end of each year, and establishing a voluntary fourth year of instruction, which clearly indicates that the real standard of the faculty cannot be reached in three years, they have taken step after step to increase their own labors, make the attainment of the degree more difficult, and diminish the resort of students to the school.

They have deliberately sacrificed numbers in their determination to improve the quality of the graduates of the school. At the same time, they have successfully carried out an improvement in medical education which required large expenditures. This improvement is the partial substitution, by every student, of personal practice in laboratories for work upon books and attendance at lectures.

The North Grove Street building, erected in 1846 or '47, contained only one small laboratory for students —that of anatomy. We shall shortly see that the new building contains a students' laboratory for each of the five fundamental subjects—anatomy, physiology, chemistry, histology, and pathology, and that a large part of the building is devoted to these working-rooms.

It was a grave question whether the profession, the community, and the young men who, year by year, aspire to become physicians and surgeons would support the faculty in making these improvements. The answer can now be recorded. The school has received by gift and bequest three hundred and twenty thousand dollars in ten years; it has secured itself in the centre of the city for many years to come by the timely purchase of a large piece of land: it has paid about two hundred and twenty thousand dollars for a spacious, durable, and well-arranged building; it has increased its annual expenditure for salaries of teachers from twenty thousand dollars in 1871 and '72, to thirty-six thousand dollars in 1882 and '83; its receipts have exceeded its expenses in every year since 1871 and '72, and its invested funds now exceed those of 1871 by more than one hundred thousand dollars.

At the same time the school has become a centre of chemical, histological, and sanitary research as well as a place for thorough instruction; its students bring to the school a better education than ever before, they work longer and harder while in the school, and leave it prepared, so far as sound training can prepare them, to enter, not the overcrowded lower ranks of the profession, but the higher, where there is always room.

The Faculty recognize that the generosity of the community and the confidence of the students impose upon them reciprocal obligations; they gladly acknowledge themselves bound to teach with candor and enthusiasm; to observe and study with diligence, that they may teach always better and better; to illustrate before their students the pure scientific spirit; and to hold all their attainments and discoveries at the service of mankind. Certainly the medical faculty have good reason to ask to-day for the felicitations of the profession and the public.

Nevertheless, the governors, teachers, graduates, and friends of this school have no thought of resting contented with its present condition. Instructed by its past, they have faith in its future. They hope, they know, that the best fruits of their labors will be reaped by later generations. The medical profession is fortunate among the learned professions in that a fresh and boundless field of unimaginable fertility spreads out before it.

Its conquests to come are infinitely greater than those already achieved. The great powers of chemistry and physics, themselves all new, have only just now been effectively employed in the service of medicine and surgery. The zoölogist, entomologist, veterinarian, and sanitarian have just begun to contribute effectively to the progress of medicine. The great achievements of this century in medical science and the healing art are all prophetic. Thus, the immeasurable deliverance of mankind from smallpox is an earnest of deliverance from measles, scarlatina, and typhoid fever.

Within forty years anæsthetics and antiseptics have quadrupled the chances of success in grave surgical operations, and have extended indefinitely the domain of warrantable surgery; but in value far beyond all the actual benefits which have thus far accrued to mankind from these discoveries, is the clear prophecy they utter of greater blessings to come. A medical school must always be expecting new wonders.

How is the medical science to be advanced? First, by the devoted labors of men, young and old, who give their lives to medical observation, research, and teaching; secondly, by the gradual aggregation in safe hands of permanent endowments for the promotion of medical science, and of the sciences upon which medicine rests.

Neither of these springs of progress is to fail us here. Modern society produces the devoted student of science as naturally and inevitably as mediæval society produced the monk. Enthusiastic devotion to unworldly ends has not diminished; it only manifests itself in new directions. So, too, benevolence and public spirit when diverted by the teachings of both natural and political science from many of the ancient forms of benevolent activity, have simply found new and better modes of action.

With thankfulness for the past, with reasonable satisfaction in the present, and with joyful hope in the future, the medical faculty celebrate this anniversary festival, welcoming their guests, thanking their benefactors, and exchanging with their colleagues, their students, and the governing boards mutual congratulations and good wishes, as the school sets bravely out upon its second century.

And now, ladies and gentlemen, I have the pleasure of presenting to you our oldest professor and our youngest, our man of science and our man of letters, our teacher, and our friend Dr. Holmes.

Dr. Holmes then delivered his oration (see page 421).

Dr. Francis Minot then presented a portrait of Prof. Holmes, in behalf of the donors. He said:

Mr. President: "Many alumni of the school, beside many of its present students, have desired that a permanent memorial of their beloved teacher, Professor Oliver Wendell Holmes, should be placed in the new college building, in token of their gratitude for the great services which he has rendered to many generations of his pupils. By his eminent scientific attainments, his sound method of teaching, his felicity of illustration, and his untiring devotion to all the duties of his chair, he inspired those who were so fortunate as to come under his instruction, with the importance of a thorough knowledge of anatomy, the foundation of medical science.

In the name of the alumni and students of this college, I have the pleasure of presenting to the medical faculty, a portrait of Prof. Holmes, painted by Mr. Alexander, to be placed in the college in memory of his great and invaluable services to Harvard University, to the medical profession, and to the community.

Hon. Samuel A. Green, M. D., in behalf of the donors, then presented a bust of Prof. Henry J. Bigelow. He said:

The pleasant duty has been assigned me, Mr. President, to present to you, as the head of the corporation of Harvard College, in behalf of his many friends, this animated bust of Professor Henry J. Bigelow.

The list of subscribers comprises about fifty names, and includes nearly all the surgeons of the two great hospitals in this city; several gentlemen not belonging to the medical profession, but warm personal friends of Dr. Bigelow; a few ladies who had been his patients, and all the surgical house pupils who had ever been connected with the Massachusetts General Hospital, during his long term of service at that institution, so far as they could easily be reached by personal application.

The bust is given on the condition that it shall be placed permanently in the new surgical lecture-room, which corresponds to the scene of Dr. Bigelow's long labors in the old building. It has been made by the eminent sculptor Launt Thomson, of New York, and is a most faithful representation of the distinguished surgeon. It outlines with such accuracy and precision the features of his face and the pose of his head that nothing is wanted, in the opinion of his friends, to make it a correct likeness.

I need not, in the presence of this audience, name the various steps by which Dr. Bigelow has reached the high position which is conceded to him as freely and fully in Europe as it is in America; but I cannot forbear an allusion to some of his original researches.

His mechanism of the reduction of a dislocated femur by manipulation was a great discovery in surgical science, and follows as a simple corollary to the anatomical facts which he has so clearly and minutely demonstrated. His operation of rapid lithotrity has deprived a painful disease of much of its terror, as well as of its danger.

Nor should I overlook on this occasion his quick and ready discernment of the importance of Dr. Morton's demonstration of the use of ether as a safe anæsthetic, which took place at the Massachusetts General Hospital, in the Autumn of 1846. The discovery of this greatest boon to the human family since the invention of printing was fraught with such immense possibilities that the world was slow to realize its magnitude; but by the clear foresight and prudent zeal of Dr. Bigelow, shown in many ways, the day was hastened when its use became well-nigh universal.

Dr. Bigelow has filled the chair of surgery in this medical school during thirty-three years, a period of professional instruction that rarely falls to the lot of any teacher, and he now leaves it with the honored title of Professor Emeritus. During this long term of service he has taught through his lectures probably not fewer than 1800 students who have graduated at the Harvard Medical School, and perhaps 7500 more who have taken their degrees elsewhere; and by these thousands of physicians now scattered throughout the land, those of them who survive, Dr. Bigelow is remembered as most eminently a practical teacher—active in his profession, clear in his instruction, and enthusiastic in his investigations, he always had the happy faculty of imparting to his students a kindred spirit and zeal.

> "Haud inexpertus loquor."

The audience then adjourned to the Medical College on Boylston St., where

THE DEDICATORY SERVICES

were held.

After prayer, **President Eliot** said: On behalf of the President and Fellows of Harvard University and of the Medical School, I now declare this building to be henceforth devoted to the advancement of medical science, and to the improvement of the art of healing.

Mr. Henry Lee, in behalf of the donors of the building, said:

Mr. President: Thanks for your invitation to be present on this interesting occasion,—the hundredth anniversary of your Medical School, and the dedication of a new building of fair proportions well adapted to your wants, as far as a non-professional can judge.

You have assigned to me the honorable task of speaking for the contributors to the building fund.

I little thought, as I used to gaze with awe at that prim, solitary, impenetrable little building in Mason St., and with the aid of imaginative companions, conjure up the mysteries within, I little thought that I should ever dare to enter, and explore its interior; nor have I yet acquired that relish for morbid specimens which characterized my lamented kinsman, who devoted so many years to accumulating and illustrating your pathological collection.

It was an ordeal to a layman, Mr. President, especially to one who has reached the sixth age, to be so forcibly reminded, as one here is, of the

> "—— last scene of all
> That ends this strange, eventful history,
> Sans teeth, sans eyes, sans taste, sans everything."

And it is a further ordeal to assume to speak for others, whose motives for aiding you I may not adequately set forth.

This I can say, that we are citizens of no mean city; that private frugality and public liberality have distinguished the inhabitants of this "Old Town of Boston" from the days of the good and wise John Winthrop, whose own substance was consumed in founding this colony, to the present time.

Down through these two centuries and a half, the multiform and ever-increasing needs of the community have been discovered and supplied, not by the Government, but by patriotic citizens, who have given of their time and substance to promote the common weal, remembering "that the body is not one member, but many, and that the members should have the same care one for another."

It is this public spirit, manifested in its heroic form in our civil war, that has made this dear old commonwealth what we all know it to be, despite foul slanders. Far distant be the day when this scene of brotherhood shall be lost.

Purple and fine linen are well, if one can afford them; but let not Dives forget Lazarus at his gate.

> "Ill fares the land to hastening ills a prey,
> Where wealth accumulates, and men decay."

Whatever doubts may arise as to some of our benevolent schemes, our safety and progress rest upon the advancement of sound learning, and we feel assured that the increased facilities furnished by this ample building for acquiring and disseminating knowledge of our fearful and wonderful frame, will be improved by your brethren.

Some of the papers read before the International Medical Congress in London, two years ago, impressed me deeply with the many wants of the profession.

And who are more likely to have their wants supplied? For the physician is not regarded here as in some countries, as the successor to the barber surgeon, and his fees slipped into his upturned palm as if he were a mendicant or a menial.

Dining with two Englishmen a few years since, one an Oxford professor, the other the brother of a lord, I was surprised to hear their views of the social standing of the medical profession, and could not help contrasting their position here, where, if not all autocrats, they are all constitutional, and some of them hereditary, monarchs, accompanied by honor, love, obedience, and troops of friends.

But, however ranked, physicians have the same attributes the world over. I have had occasion to see a good deal of English, French, German, and Italian physicians under very trying circumstances, and have been touched by their affectionate devotion to their patients.

The good physician is our earliest and our latest friend; he listens for our first and our last breath; in all times of bodily distress and danger, we look up to him to relieve us.

"Neither the pestilence that walketh in darkness; nor the sickness that destroyeth in the noonday deters him."

"Alike to him is time or tide,
December's snow or July's pride;
Alike to him is tide or time,
Moonless midnight or matin prime."

The faithful pursuit of any profession involves sacrifice of self; but the man who calls no hour his own, who consecrates his days and nights to suffering humanity, treads close in the footsteps of his Master.

No wonder, then, that the bond between them and their patients is so strong; no wonder that we respond cheerfully to their call, in gratitude for what they have, and in sorrow for what they have not been able to do to preserve the lives and to promote the health of those dear to us.

And how could money be spent more economically than to promote the further enlightenment of the medical profession?

What better legacy can we leave our children, and our children's children, than an illumined Medical Faculty?

Dr. Henry W. Williams, in behalf of the Medical Faculty, then said:

Friends of the Harvard Medical School: For a hundred years the medical faculty of Harvard College have earnestly sought to discover, and striven faithfully to teach whatever might exalt the condition, relieve the woes, and prolong the service of those minds and bodies, through which man lives, and moves, and is. Year by year they have seen their horizon of knowledge extended, and their sphere of duty enlarged. But, though zeal and self-sacrifice have not been wanting, their efforts to be useful have been continually hindered, because of imperfect facilities and scanty resources.

All is changed; in this, more wonderful than Aladdin's palace, risen from the sea, and which has already endured the wrath and mercy of the flames, we see a fulfilment of our hopes, and the means and assurance of future success.

Thanks to generous benefactors, there will no longer be a lack of room or of appliances for our needs; our work will go on under fairer auspices, and we can offer to disciples of the healing art fitter opportunities, and ampler aid in their studies.

As spokesman of the Faculty on this occasion, so full of felicitation and of promise, I would I could give to their message a host of tongues, to adequately thank those whose great flood of bounty has thus favored and endowed us.

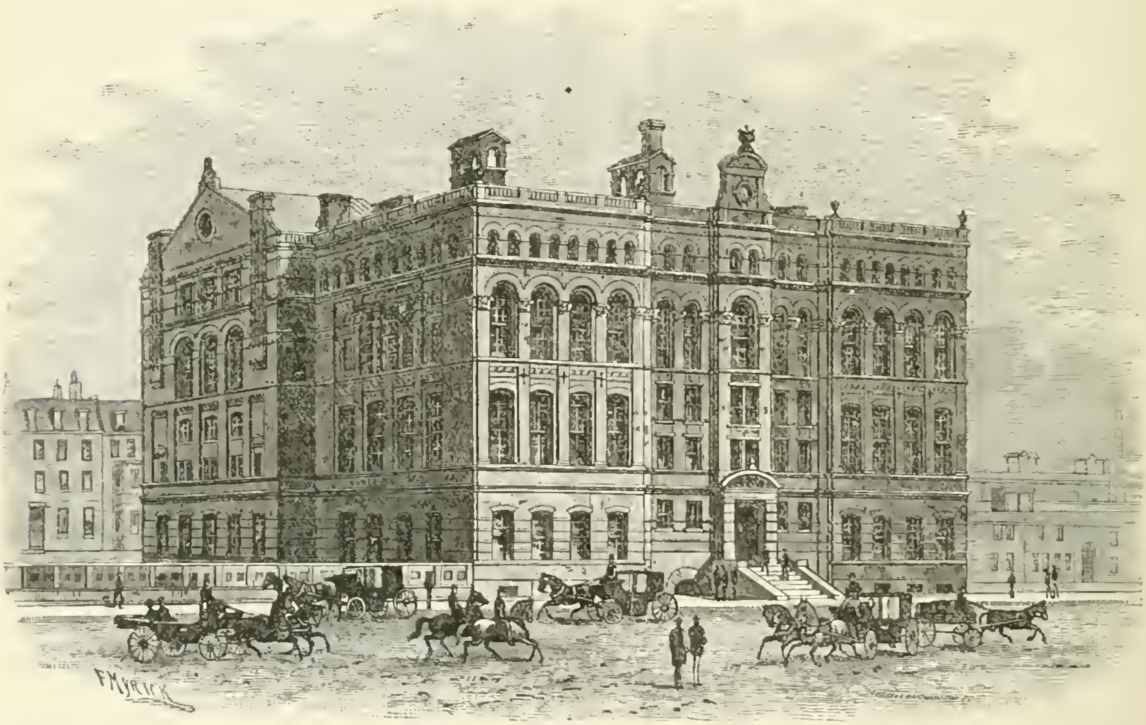
In occupying this beautiful and convenient structure, we shall ever feel that this place is dignified by the giver's deed; and we rejoice the more because we know that this gift of $300,000 has been bestowed by those who are accustomed to use their own eyes in their estimation of merit, and that it signifies a hearty approval of our endeavors, and shows that medical science, as it is to be here embodied and taught, shall have a warm and generous support.

In accepting this more than princely gift, as a token that the value and necessity of well-educated physicians to every community are felt and acknowledged, we hail the privilege of goodly fellowship in which the donors and ourselves have become co-workers to the end that blessings to the whole land may arise and be memorized in this institution; and we trust that the efforts of the faculty to advance the knowledge, train the judgment, and perfect the skill of those entering our profession will ever continue to deserve countenance and help.

At the conclusion of the exercises, a handsome collation was served, and the building was then inspected.

In the evening, the Medical Faculty entertained their guests at Young's Hotel.

Fig. 1.



The Harvard Medical College.

A DESCRIPTION OF THE NEW BUILDING ERECTED FOR THE MEDICAL SCHOOL OF HARVARD UNIVERSITY.

In order to secure for each student that direct personal supervision and instruction, forming such a marked feature of the courses offered, especially in the thorough laboratory training, which is so essential in securing a broad foundation for future clinical work, larger and better equipped rooms were required than could be obtained in the old school-building. A comparison of the plans with their detailed description will give a clear appreciation of the facilities afforded to the departments of anatomy, physiology, and chemistry, and of the carefully arranged rooms for the lectures on therapeutics, materia medica, and those branches of medicine and surgery which can be taught away from the bedside of the patient.

The comfort and convenience of the students have been carefully considered, as will be seen from the ample provision made for a study, coat-room, smoking-room, and lavatories.

The building is situated in Boston, at the corner of Boylston and Exeter Streets, in the new part of the city which is destined to be its educational centre, and which now contains numerous handsome structures, both public and private. It is at nearly equal distances from the Massachusetts General Hospital, the City Hospital, the Boston Dispensary, and the Children's and Women's Hospitals, with their rich stores of clinical material available for the purposes of teaching.

The corner position, and the reservation of a large open area on the east, will always insure good light and air to the building, which has a frontage of one hundred and twenty-two feet towards the north on Boylston Street, and of ninety feet towards the west on Exeter Street. It is handsomely built in the style of the renaissance, freely treated and developed in brick, trimmed with red sandstone and terra cotta. Decorative panels of the latter material, inscribed with the names of men great in the annals of medicine, Hippocrates, Sydenham, Paré, Celsus, Vesalius, Galen, Haller, Hunter, Harvey, and Bichat, are placed in the facade. It has four lofty stories topped by a sky-line of stone balustrades and low gables, the latter marking structural divisions of the interior. The main front on Boylston Street has three pavilions, of which the central is slightly recessed. In the interior, the material used and the plan of construction are those which the experience of the present day has shown to be the best proof against fire, all the walls being of brick without furrings, with occasional minor partitions of concrete building blocks. The floors and roof are of "mill construction," and made of three-inch planks, laid flatwise upon heavy square beams, which form the constructive and decorative divisions of all the ceilings, there being no inclosed spaces in any part. On the under side these ceilings and beams are throughout encased with plaster on wire lathing, and embellished with stucco mouldings and cornices, to serve as a protective envelope in case of fire. In order to avoid columns, the larger rooms are crossed by heavy compound trusses of iron, also encased in plaster, and into these are framed the wooden floor beams.

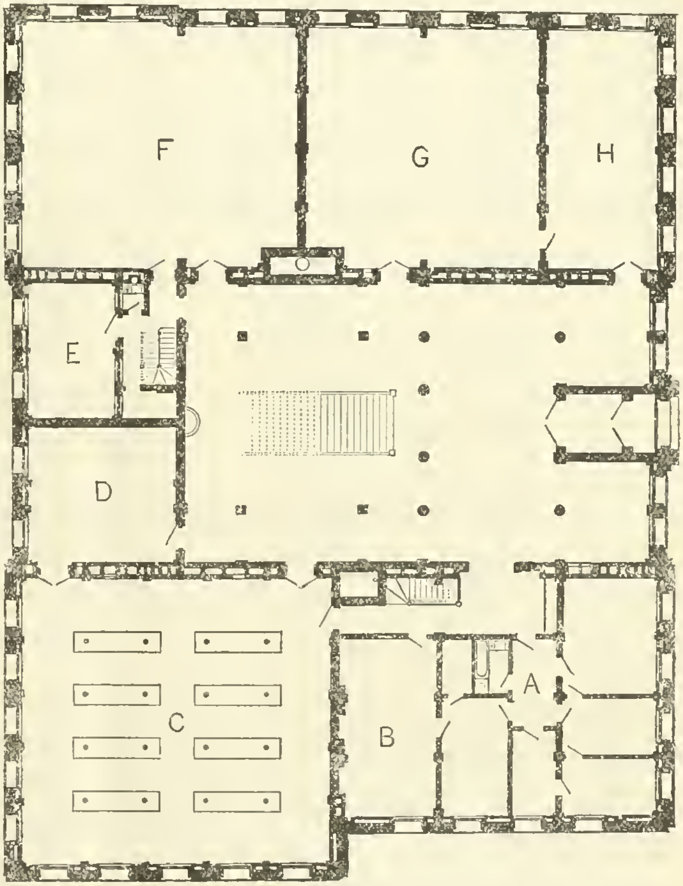
The building is finished throughout in natural woods polished, and the walls are handsomely painted in warm colors.

Heating and ventilation are accomplished by means of large stacks of steam radiators, which warm the fresh air as it passes over them to be distributed throughout the building. The air is removed by a series of flues connecting with a central shaft in which an upward current is maintained by means of heated coils of pipe. An additional amount of direct heat is furnished by small radiators placed in each room.

Both hot and cold water are supplied wherever needed, and the entire building is abundantly lighted with gas.

The plan, in general, is that of a large central hall, lighted from above, containing the main stairway, about which the different rooms are grouped. Adjoining this are two brick wells extending from the cellar to the roof. In one of them is a stairway giving access to the instructors' rooms, and which can be used as a fire-escape if necessary. In the other is the elevator for passengers and freight, with doorways opening at the several landings of the stairways, and others communicating with the various rooms connected with the laboratories and lecture-rooms. Four floors and a basement are required for the various rooms.

Fig. 2.

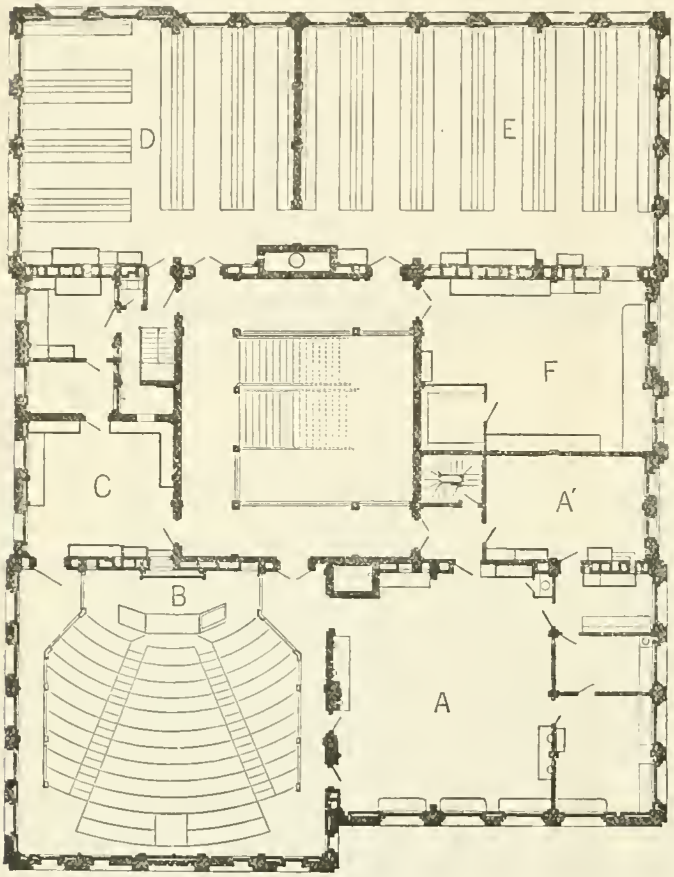


A. Janitor's apartments. B. Coat-room. C. Reading-room. D. Smoking-room. E. Ante-room. F. Lecture-room. G. Library. H. Faculty-room.

GROUND FLOOR.

The main entrance to the building is into the central hall from Boylston Street. In the interior, over the main entrance, has been placed a handsome marble tablet on which are inscribed the names of the medical alumni who fell in the War of the Rebellion. On the left or easterly side of the wall is an archway leading to a window opening into the *Janitor's Apartments* (Fig. 2, A), where letters and packages for the students are received, and where bells and speaking-tubes connecting all parts of the building unite.

FIG. 3.



A. Laboratory, Physiology. A′. Mechanic' sroom. B. Lecture-room. C. Ante room, Chemistry. D. Laboratory, Medical Chemistry. E. Laboratory, General Chemistry. F. Chemical Supply-room.

From the southeast corner of the central hall opens the *Students' Reading-room* (Fig. 2, C), having an area of about sixteen hundred square feet, and amply provided with tables for reading and writing. Connected with this, as well as with the south side of the hall, is a smaller room (Fig. 2, D) where conversation and smoking will be allowed.

Leading from the janitor's window to the reading-room is a narrow corridor, from which the students' *Lavatories*, etc., in the basement are reached, while the remainder of the latter is used for the heating apparatus and storage. The coat-room (Fig. 2, B) also opens from this entry.

A large room and adjoining ante-room (Fig. 2, F and E) have not been especially assigned as yet, but will be used for lectures or recitations as occasion may require.

Occupying the centre of the westerly side is the room for the general *Library* (Fig. 2, G), with ample space for its valuable medical classics and the more recent books which are added from time to time. Next to this on the north is the room for the faculty (Fig. 2, H), where its meeting will be held and the school records preserved.

SECOND FLOOR.

A broad flight of iron stairs leads to the second floor, which is entirely devoted to the *Departments* of *Physiology* and *Chemistry*, with their laboratories and lecture-room. The physiological laboratory (Fig. 3, A) occupies a space forty by thirty feet in the centre of the eastern side. It will be provided with the most approved apparatus for illustrating lectures and for students' use. Opening into the laboratory on the north are rooms for the professor and his assistants, as well as one especially fitted for chemical manipulation. Adjoining the laboratory on the west is a room for the mechanic (Fig. 3, A′) who takes care of the laboratory and makes needed repairs. Above is a room for a special library and study for the department. The laboratory is directly connected with the lecture-room (Fig. 3, B), beneath the seats of which are rooms for special and optical experiments.

The *Chemical Department* occupies the entire western side of this floor. The large laboratory, having over two hundred desks, is divided to accommodate the classes in general and medical chemistry (Fig. 3, D and E), and will be provided with spacious hoods, steam-baths, and all modern apparatus. The room for the professor is on the south, opening into the laboratory on one side, and into a preparation-room (Fig. 3, C) adjoining the lecture-room on the other. Special analyses will be conducted in the half-story over C and the adjoining rooms. The laboratory assistants' room, from which supplies of chemicals and apparatus will be distributed to the students, is situated upon the north side (Fig. 3, F). An assistant will be at hand to aid students in the laboratory throughout the day.

The students' entrance to the lecture-room (Fig. 3, B), is from a landing half-way between the second and third floors. This room, which will accommodate about two hundred persons, is furnished with raised seats, planned after a careful comparison of the most approved models. A large blackboard and screen for diagrams are placed against the wall.

THIRD FLOOR.

The third floor contains the *Amphitheatre* for the lectures on *Anatomy* and *Surgery*, the Warren Anatomical Museum, and two large rooms for medical lectures and recitations.

The seats of the amphitheatre (Fig. 4, B) are arranged in the manner implied by the name, for the purpose of giving each student an unobstructed view of the demonstrations. The same general model of seat has been used here as in the room below, but so modified as to meet the special requirements of the teaching. The room is thirty feet in height and lighted from above as well as from the sides, and will accommodate about three hundred students.

On the south side are the rooms for the professor and demonstrator of anatomy (Fig. 4, C); while connecting with the floor of the amphitheatre by a short passage are the rooms for the surgical department (Fig. 4, B′) and curator of the museum (Fig. 4, A′). Direct access to the museum is also to be had from the floor of the lecture-room.

The room intended for the *Warren Anatomical Museum* (Fig. 4, A) extends eighty feet along the north side of the building, is forty feet in width, and has a height of eighteen feet. The collection is placed in cases against the wall and in alcoves, divided into two tiers by a light gallery extending round the room. The cases themselves are handsomely made in the manner best adapted to prevent the entrance of dust and insects, and the specimens number over seven thousand.

The two lecture-rooms (Fig. 4, D and E) opening from the westerly side of this floor are especially intended for exercises which do not require extensive demonstration or experiment. The seats are placed on the floor level, while the lecturer occupies a raised platform, behind which are the screen and blackboard. Separating these, but connecting with both, is an ante-room (D′) where diagrams and other illustrations can be kept.

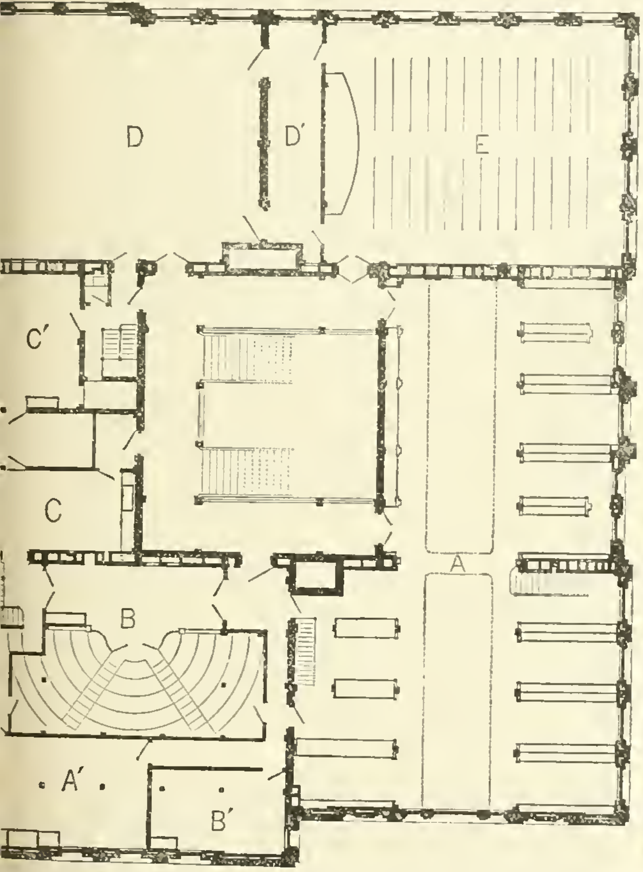
FOURTH FLOOR.

In the southeast part of the fourth floor two large doorways give access to the upper part of the amphitheatre, and it is through these that the students enter (Fig. 5, B).

Occupying two-thirds of the western side of this floor is the large room for practical anatomy (Fig. 5, E). Large skylights give abundant direct light upon the tables for classes, while the windows lining the sides of the room serve the same purpose for special students working at benches placed beneath. The floor slopes slightly, and is waterproof. Boxes for books, instruments, etc., with separate lock and key for the students' use, are placed against the wall.

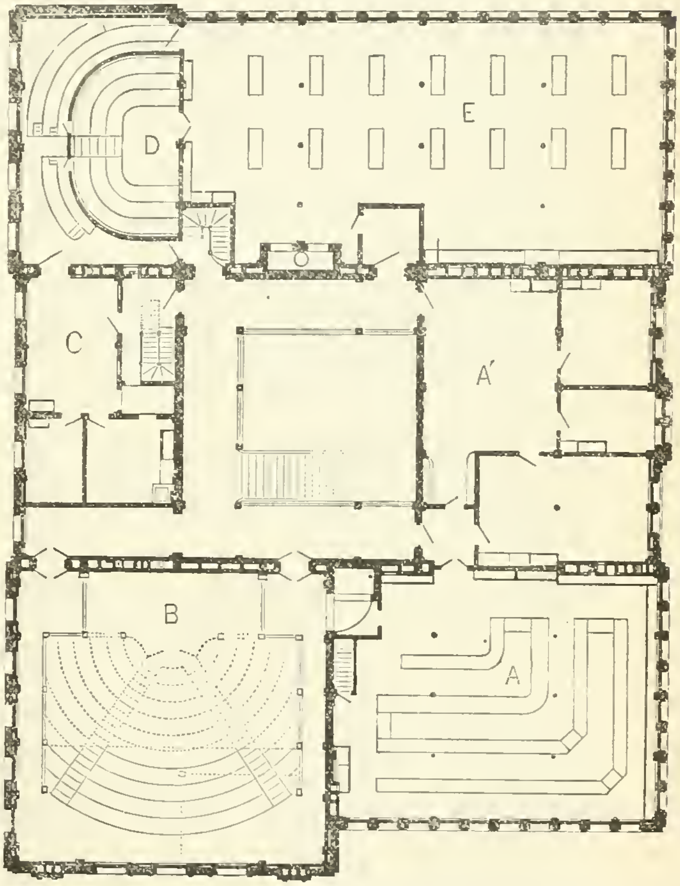
A small amphitheatre (Fig. 5, D) opens from this. Here operative courses in surgery and obstetrics will be held, and special demonstrations given. In close proximity are the rooms for the demonstrator and his assistants (Fig. 5, C).

Fig. 4.



Museum. A′. Curator's room. B. Amphitheatre. B′. Ante-room. C. onstrator's room. C′. Demonstrator's room. D. Lecture-room. D′. -room. E. Lecture-room.

Fig. 5.



A. Laboratory, Pathological Anatomy and Histology. A′. Laboratory, Experimental Pathology. B. Amphitheatre, Upper Half. C. Ante-rooms, Anatomy, Surgery, and Obstetrics. D. Amphitheatre, Operations and Demonstrations E. Practical Anatomy.

The pathological laboratory is entered from the northeast corner of the building (Fig. 5, A). It has been arranged with special reference to the exhibition of recent morbid specimens and for microscopical work. A private stairway leads to the museum, so that specimens for comparison or illustration can always be easily obtained. A series of continuous tables occupy the centre of the room, along which specimens can be passed for inspection after they have been demonstrated. The height of the tables has been regulated with special reference to the use of microscopes, as the classes in normal and pathological histology will also work here. Placed beneath the windows are tiers of boxes, where the instruments are to be kept. Two large open sinks are provided for general use, and one, smaller and covered with a hood, for use in demonstrations.

Four smaller rooms (Fig. 5, A′) connect with this laboratory, where advanced students or graduates can make special investigations under the direction of the professor of pathological anatomy.

From this brief description it will be seen that facilities are offered to the student for the thorough study of medicine in all its branches. The new laboratory arrangements are not excelled in this country, and the well-appointed rooms for lectures and recitations afford every means for the collection and display of illustrations. These greatly increased conveniences for laboratory and didactic instruction are supplemented by the numerous and varied opportunities for the observation and study of clinical cases, so amply provided at the different general and special hospitals and dispensaries.

Yellow Fever at Pensacola.—Surgeon-General Hamilton received, on October 12th, a telegram from Lieutenant-Commander Welch at the Navy Yard, Pensacola, Fla., reporting the last case of yellow fever there to be convalescent. Unless there are signs of further cases of fever during the next ten days, General Hamilton says that the quarantine against that section will be abolished.

A dispatch received on October 13th reported that the last case of yellow fever had been discharged, and that there were no signs of any new cases.

The Fever in Alabama.—A dispatch of October 13th states that Surgeon Stone, of the Marine-Hospital Service, stationed at Savannah, has been ordered by the Surgeon-General to proceed to Brewton, Ala., and investigate the alleged epidemic at that place. The Louisiana State Board of Health has been requested to send a competent inspector to act with Surgeon Stone in the investigation.

Since last Saturday night there have been five deaths from the prevailing fever at Brewton. Five new cases were reported during that time. Fever experts have arrived there, but have, as yet, reached no decision as to the nature of the disease.

Yellow Fever at Havana.—A telegram of Oct. 13th states that D. M. Burgess, Sanitary Inspector of the United States Marine-Hospital Service at Havana, reports that during the month of September there were 562 deaths in that city. Sixty deaths were from yellow fever, forty-four of which occurred among the mercantile shipping and private individuals, and the remainder in the military hospital. There were twenty deaths from yellow fever at Havana during the week ending Oct. 5. The wharves are markedly infected, and shipping going to them now runs the risk of becoming invaded by the disease.

Yellow Fever at Vera Cruz.—A report from Vera Cruz of Sept. 27 says that no yellow fever has recently occurred among the shipping at that port.

Smallpox in New Orleans.—For the weeks ending September 29th and October 6th there were, respectively, six and three deaths from smallpox in New Orleans.

Typhoid Fever in Connecticut.—Much anxiety is felt at Waterbury regarding the health of the city. There were sixteen deaths from typhoid fever in August, nine in September, and several this month. There are at this time many persons sick, and the prevalence of disease is attributed to the low water-supply, and the opening of the streets for new sewers.

Koch's Investigations of Cholera.—Dr. Koch, of the German Commission which went to Egypt to investigate the cholera epidemic, reports that he has discovered that cholera is due to a living thread-like microscopic organism, resembling that seen in cases of phthisis.

Gift to the Vermont University.—Mr. John P. Howard has announced his intention of giving a new building for the medical department of the University of Vermont, and of refitting the old building for a gymnasium. The cost will be about $40,000. This will make over $400,000 that Mr. Howard has given to the University and the city within ten years.

French Association of Physicians.—The Presidency of the Section of Medicine of this body has been conferred upon M. Nicaise, for 1884. The next Congress of the Association will be held at Grenoble.

Honors to Professor Lister.—Professor Lister, who recently spent some days in Pesth, was warmly welcomed on the part of the medical faculty of the University there. The professors gave a banquet in his honor, and the students arranged a torchlight procession to the great surgeon. At the banquet, which took place at the Queen of England Hotel, all the professors were present. The dinner over, the students, several hundred strong, appeared before the hotel with torches, a deputation was sent up, and Mr. Lister and his wife, followed by the professors, came out on the balcony. They were received with much cheering. After an address in Hungarian by one of the students, another addressed Mr. Lister in English, asking to be the interpreter of the feelings of his fellow-students in offering their homage. Mr. Lister replied in German, thanking the students for their welcome.

Harvey's Remains.—On last Thursday the remains of the illustrious surgeon and physician, Harvey, were to be removed from a vault under Hempstead Church, and placed in the Harvey Chapel in a sarcophagus furnished by the Royal College of Physicians.

Malady of the Count de Chambord.—The disease of the late Count de Chambord, according to M. Vulpian, who saw him in consultation, was characterized, from an anatomical point of view, by ulcerations of the gastric mucous membrane, and especially of the mucous membrane of the œsophagus; from a clinical point of view by a collection of symptoms which inevitably led to the diagnosis of cancer of the stomach. There was also degeneration of the kidneys.

Garfield Memorial Hospital.—The erection of the new Garfield Memorial Hospital in Washington began last week. On the ground recently purchased by the Hospital Association at the head of Tenth Street, there is already a brick dwelling-house commanding a fine view of the city. This house is two stories high, and has ample rooms, and will be used as the dwelling of the officers and attendants at the Hospital.

West Virginia State Board of Health.—Dr. Geo. H. Carpenter, of Moorefield, has retired from the State Board of Health of W. Va., to accept the place vacated by Dr. N. D. Baker, of Martinsburg, on the Board of Directors of the Asylum for the Blind and Deaf at Romney, while Dr. Baker has taken Dr. Carpenter's place on the State Board of Health. The exchange of places was made by Governor Jackson to accommodate the wish of Drs. Baker and Carpenter.

Student's Club-room at Guy's Hospital.—Among the recent improvements made at this hospital for the accommodation and convenience of students, is the formation of a club and refreshment room, which enables the industrious student to obtain a mid-day meal without going out to one of the dining and coffee-houses in the neighborhood. The entrance fee is merely nominal, and the food cheaper and better served than that to be obtained elsewhere. Experience has shown that, so far from being a lounging-room for the idle, those who frequent the club are industrious men who desire to save the time lost in going outside the walls of the hospital. The club was opened last winter as an experiment, but its popularity has greatly increased, and a very large proportion of the students now avail themselves of its advantages.

Trichinosis in Saxony.—Reports from London, of Oct. 16, state that an outbreak of trichinosis is reported at Ermsleben, Russian Saxony. One hundred and eighty persons are suffering from the disease, and four deaths therefrom have occurred.

Foot and Mouth Disease in England.—Notices in the *Gazette* show that the foot and mouth disease in England is gradually disappearing.

Cholera Congress at St. Petersburg. — The *British Medical Journal* of September 29th, says that there is reason to believe that a Medical Congress will be held in St. Petersburg during the present month, for the purpose of discussing all matters connected with cholera. MM. Charcot and Pasteur and other European authorities are said to have promised to be present.

International Sanitary Code.—We learn that the European powers have signified their agreement to the proposal of the Italian Government to summon a conference at Rome, with the object of making sanitary regulations, and drawing up an International Sanitary Code. Signor Mancini, Minister for Foreign Affairs, will shortly address a circular to the Powers on the subject.

Cholera Chemically Considered.—M. Ramon de Luna has given expression to his views on cholera at a recent meeting of the Académie des Sciences. He believes that the cause of cholera is always to be found in the atmosphere; that it exerts its action exclusively through the respiratory passages; that it is especially during the passive condition of the individual, particularly during sleep, that its incubation takes place; that the microbe or ferment acts chiefly on the blood corpuscles, preventing proper oxidation, and so leading to gradual suffocation; that the only remedy which was ascertained to do any good was the inhalation of the fumes of nitrous acid mixed with air; and that the same agent is of prophylactic value against cholera. These conclusions are given as the result of practical successful experience.—*Lancet*, Sept. 29, 1883.

The Gresham Lectures.—The Gresham Lectures, delivered in Gresham College, Basinghall Street, by Dr. E. Symes Thompson, discussed the subject of Nursing. The first lecture treated of observation and watchfulness, the administration of medicine, methods of feeding, and how to prepare peptonized foods, etc.; the second, of knowledge and judgment, the application of external remedies, and the prevention of needless suffering. The third lecture dealt with purity and impurity, the purification of house and patient, and the various forms of, and methods of employing, antiseptics. The fourth lecture was devoted to firmness and authority, the removal of restraints during convalescence, the importance of change of air, invalid furniture, and, finally, an account of a visit to the Hygienic Exhibition at Berlin in August, 1883.—*Lancet*, Sept. 29, 1883.

Quarantine on Vessels from Mediterranean Ports.—Quarantine on arrivals from Mediterranean ports has been reduced at Malta to periods ranging from four to ten days, minus the actual duration of the voyage. Arrivals from Greece are admitted to free pratique, but the quarantine regulations are still enforced against those from Egypt. In French ports, vessels from Syria are now subjected to only twenty-four hours' quarantine of observation, and at Odessa and Kertch, quarantine for vessels with clean bills of health has been reduced to three days' observation, counting from departure from Constantinople.

Epidemic Religious Excitement.—The *Journal de Ploërmel* reports a curious example of one of those outbreaks of epidemic nervous disorder which were characteristic of the Middle Ages, but are now rarely heard of. Of fifty pupils of the Girls' Congregational School of Saint Marlo des Trois Fontaines, upward of thirty-five have been attacked by a nervous disorder having all the symptoms of St. Vitus' dance. The school has been closed by order of the local authorities. —*British Med. Journal*, Aug. 18, 1883.

New Surface Thermometer.—M. Burq has recently completed a new surface thermometer, made of a small ivory case, in the lower part of which is solidly encased the tube for the mercury. There is a scale, minutely divided, with a needle pointer which indicates the maximum position in a series of observations. The inventor designed it to indicate the thermic effects of metallic applications, though it will probably be a valuable aid in studying local variations of temperature.

Generous Recognition.—It is said that the Emperor of Brazil has given Prof. Lacerda $20,000 for his discovery of permanganate of potassium, hypodermically injected, as an antidote for the bite of the cobra.

New Medical Academy in Siena. — Under the Presidency of Prof. G. Marcacci, a new society has been formed in Siena for the advancement of medical science, under the title "Societa fra i Cultori della Scienze Mediche."

Magnesia in Beer.—As a custom of adding magnesia to beer to preserve it is now becoming general, a word in time from the medical profession may avert what threatens to become a danger to health. Formerly, to preserve beer, only salts of lime and the alkalies were used; these imparted harsh and soapy tastes respectively. As magnesian compounds are not so perceptible (when in beer) to the taste, their use in brewing is replacing that of lime. Pure beer itself contains more magnesia than can be taken with impunity by many constitutions, the addition of further quantities under names known to the trade as "antacid," to correct beer, "C and D," to preserve it, "concentrated Burton water" to harden brewing water, may easily increase the amount to an injurious quantity. Brewers do not inquire into the nature of the chemicals now largely used by them, and cannot be aware of their effects. It is time that they were reminded that the continual drinking in a popular dietetic of salicylic acid, magnesia, vegetable bitters, etc., is a question which concerns the public health quite as much as their own profits. Drinking-waters containing excessive quantities of magnesia are frequently condemned;

beer can disguise more, and should be closly watched. In obscure cases of purging, it will be well for the medical adviser to bear in mind the possible, but hitherto unsuspected, presence of excessive quantities of magnesia in beer.—*British Medical Journal*, September 18, 1883.

MANAGEMENT OF MEASLES.—The Board of Health of Boston have issued the following circular of recommendations for the proper management of measles:

When a case of measles occurs, put the patient in a room apart from the other inmates of the house, and allow no person to enter such room, except the nurse and physician. Have the sick chamber properly warmed, exposed to the sunlight, well aired and relieved of all unnecessary furniture and other articles which cannot be cleansed without injury.

All clothing removed from the patient, or the bed, should be at once placed in boiling water, or in a tub of disinfecting fluid—three pounds of sulphate of zinc and one and a half pounds of common salt to each ten gallons of water. Water-closets and privies in the house should be disinfected frequently with a solution of copperas—two pounds to a gallon of water. Every kind of filth in or about the house should be removed, and disinfectants freely used.

Children in the family should not attend school, or mingle with other children, until the patient has wholly recovered, and all infected articles have been disinfected.

On the recovery or death of the patient, the most thorough disinfection should follow. The room and all articles in it should be at once subjected to the fumes of burning sulphur as follows: Close the room tightly, and burn two pounds of sulphur to each thousand cubic feet of space.

After four or six hours, open the room, and expose it to free currents of air.

Anything that can be boiled without injury may be so treated. The walls and ceilings should be dry-rubbed or lime-washed, and the floors washed with some disinfecting liquid. When death occurs, the body should be immediately placed in a tight coffin, with disinfectants, and the coffin tightly and finally closed.

No public funeral should ever take place at the house where the patient has died, until the coffin has been tightly sealed, and the most thorough disinfection has taken place.

Nurses ought to be particularly careful to remove all infection from themselves and their clothing before leaving the house.—*Sanitary Engineer*, September 13, 1883.

HEALTH IN MICHIGAN.—Reports to the State Board of Health, for the week ending October 6, 1883, indicate that influenza, diphtheria, and intermittent fever have increased, and that dysentery, typho-malarial fever, pneumonia, and cholera morbus have decreased in area of prevalence.

Including reports by regular observers and others, diphtheria was reported present during the week ending October 6, and since, at twenty-six places, namely, Calumet, Coldwater, Clarence, Clam Lake, Detroit, Ensley, Grand Rapids, Ida, Jackson, Kalamazoo, Kendall, Lansing, Manistee, Manton, Monroe, Mt. Pleasant, Nashville, Newberry, Niles, Pontiac, Petersburg, Saginaw, Sault Ste Marie, Somerset, Utica, and Whitehall. Scarlet fever at twenty places: Bingham, Belvidere, Detroit, Dorr, Edmore, Fentonville, Grand Rapids, Ithaca, Jackson, Lowell, Manistee, Manton, Monroe, Mendon, Nashville, Pierson, Saginaw, Somerset, Summit, and Whitehall. Measles at four places: Charlevoix, Grand Rapids, Otsego, and Union City.

MEMORIAL TABLET TO M. THUILLIER.—A tablet commemorative of the public services of M. THUILLIER, and his untimely death of the disease whose nature and causes he had accompanied M. Pasteur to Egypt to investigate, will be placed in the Normal School at Paris, of which he was a graduate.

OBITUARY RECORD.—The death at the age of eighty-four is announced of DR. WILHELM BAUM, of the University of Göttingen. He became the senior of the medical faculty on Wöhler's decease, and had long held the chair of surgery, which is now occupied by Kœnig. He was considered in Germany as one of the school of conservative surgery to which Langenbeck and Stromeyer belong.

DR. JAMES A. SEWELL, of Quebec, Dean of the Medical Faculty of Laval University, died on October 2d, aged 73. He was a graduate of Edinburgh, and had practised in Quebec for half a century.

NOTES AND QUERIES.

CORRIGENDUM.

In our issue of October 6th, page 387, second column, twenty-seventh line from bottom, for "A paper was then read by Dr. E. Bock," read "by DR. EDWARD BORCK," of St. Louis.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM OCTOBER 8 TO OCTOBER 15, 1883.

HAMMOND, JOHN F., *Colonel and Surgeon.*—Leave of absence on surgeon s certificate of disability granted April 2, 1883, extended six months on surgeon's certificate of disability.—*Par. 7, S. O. 231, A. G. O.*, October 8, 1883.

SWIFT, EBENEZER, *Lieutenant-Colonel and Assistant Medical Purveyor.*—Under the provisions of section 1 of the act of Congress approved June 30, 1882, is, by operation of law, this day retired from active service, and will proceed to his home.—*Par. 4, S. O. 231, A. G. O.*, October 8, 1883.

HARTSUFF, ALBERT, *Major and Surgeon.*—Granted leave of absence for fifteen days.—*Par. 2, S. O. 205, Department of the Missouri*, October 6, 1883.

HUNTINGTON, DAVID L., *Major and Surgeon.*—By direction of the President, will, until further orders, take charge of the office of the Surgeon-General of the Army, and perform the duties pertaining thereto.—*Par. 3, S. O. 234, A. G. O.*, October 11, 1883.

MEACHAM, FRANK, *Major and Surgeon.*—Assigned to duty at Fort Douglas, Utah.—*Par. 3, S. O. 109, Department of the Platte*, October 6, 1883.

STERNBERG, GEORGE M., *Major and Surgeon.*—Granted leave of absence for one month to date, from October 6, 1883, with permission to go beyond the limits of the Department, and to apply for extension of one month.—*Par. 3, S. O. 134, Department of California*, October 4, 1883.

CRONKHITE, H. M., *Captain and Assistant Surgeon.*—Assigned to duty at Fort D. A. Russell, Wyoming.—*Par. 3. S. O. 109, Department of the Platte*, October 6, 1883.

WEISEL, DANIEL, *Captain and Assistant Surgeon.*—Assigned to duty at Fort Fred. Steele, Wyoming.—*Par. 3, S. O. 109, Department of the Platte*, October 6, 1883.

ARTHUR, W. H., *First Lieutenant and Assistant Surgeon.*—Assigned to duty at Fort Douglass, Utah.—*Par. 3, S. O. 109, Department of the Platte*, October 6, 1883.

STRONG, NORTON, *First Lieutenant and Assistant Surgeon.*—Assigned to duty at Fort Washakie, Wyoming.—*Par. 3, S. O. 109, Department of the Platte*, October 6, 1883.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

Vol. XLIII. Saturday, October 27, 1883. No. 17.

ORIGINAL LECTURES.

LOCOMOTOR ATAXIA.

A Course of Three Lectures delivered before the Cincinnati Medical Society,

By PHILIP ZENNER, A.M., M.D.,

OF CINCINNATI, OHIO.

LECTURE II.

PATHOLOGY.

Gentlemen: In considering the pathology of this disease, we will have to speak of both the locality and nature of the pathological changes, and in how far the latter enable us to explain the symptoms presented. In order the more intelligibly to approach this subject, permit me first to speak briefly of our present knowledge of the functions of the spinal cord. Notwithstanding great advances of late years, that knowledge is still extremely meagre. For in the way of anatomical, experimental, and pathological researches, through which this knowledge is acquired, there are great and serious obstacles. The anatomist can trace the nerve-roots, whose functions are known, such a short distance into the cord as not thereby to determine the function of any of its integral parts. The physiologist by his experimental studies has been enabled to determine, with a considerable degree of certainty, that parts of the anterior columns convey motor impulses. But as to the posterior columns he has come to far less definite results. Schiff concludes, from his experiments, that the posterior white columns convey tactile sensations, that the posterior gray matter conveys sensations of pain. But herein he is not upheld by all physiologists. Ludwig and Woroschiloff, from recent experiments, have concluded that the lateral columns also contain sensory fibres, but their experiments were made on rabbits, and their results cannot, without further consideration, be accepted as true for man.

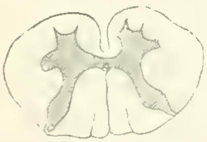
Our knowledge of the cord has recently been greatly advanced by the investigations of Flechsig; his results were obtained from a study of the development of the cord. He observed that some nerve-fibres become enveloped with their medullary sheaths earlier than others, the two being easily distinguished by their color; the one white, the other more translucent or colorless. He was thus enabled to determine that whole strands of nerve-fibres became medullated at different periods; some in the early months of fœtal life, others being not yet completely medullated at birth. From this, as well as some other considerations, he concluded that the cord was composed of a number of different nerve-bundles which were anatomically and functionally distinct; these different nerve-strands he terms systems. Those which are earliest medullated, appear to contain only short fibres, either short continuations of the spinal roots or fibres connecting one part of the cord with the other; those medullated latest appear to contain long fibres which connect the cord with higher intracranial centres.

On one of the accompanying figures I wish to point out these several systems. On the first figure is merely represented the usual appearance of a section of the cord. Between the anterior fissure and the posterior roots are the antero-lateral columns; between the posterior fissures and roots, the posterior column divided by a slight sulcus (in the cervical region) into the external or Burdach's column, and the internal or column of Goll. On the second figure are delineated, in a diagrammatic manner, the systems of Flechsig. Those remaining white are the various systems containing short fibres. The darkened ones contain long fibres, and are respectively the pyramidal tracts connecting the central convolutions in the brain with the muscles; the cerebellar strands connecting, probably, Clarke's column in the cord with the cerebellum; and Goll's column, of which we will speak again.

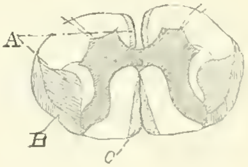
These results of Flechsig are largely corroborated by the studies of secondary degenerations. It is well known that when nerve-fibres are cut off from their trophic centres, they will degenerate throughout their whole peripheral extent. Thus, after lesions of the internal capsules, the pyramidal tract will degenerate throughout its whole extent in the cord. After section of the cord, experimental or otherwise, the systems containing short fibres degenerate for a short distance above and below the seat of section. But we wish here to speak of secondary degenerations of the posterior columns, and this for two reasons; because these columns especially interest us in our studies to-day, and because Flechsig, in his researches, was enabled to throw less light upon this part than upon other portions of the cord; only finding Goll's column with distinctness in the upper parts of the cord. After disease of the cauda equina, secondary degeneration has been observed in the lumbar region, involving the greater part of the posterior column, while in the dorsal and cervical regions it is limited to Goll's column. This secondary degeneration can be traced as far as the medulla. Singer has experimentally evoked the same changes through section of the posterior roots of the sacral and lumbar nerves. These observations lead us to conclude that fibres of the posterior roots, after penetrating the gray matter of the cord, pass upward in Goll's column as far as the medulla oblongata. Lesions of higher portions of the cord of the dorsal and cervical portions, as well as some recent experiments of Kahler, inform us that the posterior root-fibres in these parts also ascend in Goll's column, but are contained in the more external and anterior part of that column. These facts are illustrated on this plate (presented to the Society), on which are represented the sections at various levels of the cord, in five cases of secondary degeneration reported by Schulze. In three of these the primary lesion was in the lower; in two, in the upper portion of the cord.

These various studies, those of Flechsig on the development of the cord, and those of secondary degenerations, enable us to map out separate nerve-strands

Fig. 1.



Fig, 2.



A. Pyramidal tract. *B*, Cerebellar fasciculus. *C.* Column of Goll.

which are, at least in a degree, anatomically and functionally distinct. And now let us ask, do pathological processes ever attack and limit themselves to one or more of these systems? They do; and such are termed systematic diseases. Thus, amyotrophic lateral sclerosis attacks the lateral columns and, their probable terminations, the ganglion cells of the anterior cornua, and causes paralysis and atrophy of muscles. We will not mention other systematic diseases which have been more or less definitely determined, but ask—Is or is not locomotor ataxia a systematic disease? Is it a diffuse myelitis which only accidentally limits itself to the posterior columns, or does it primarily attack and limit itself to certain bundles of nerve-fibres, which are anatomically and functionally distinct? Before attempting to answer this question, let me first briefly state what are the pathological changes in this disease. We find what is usually termed gray degeneration. On section of the cord at an early period of the disease, the diseased areas are observed to be of a gray or grayish-red color, thus contrasting with the normal white tissue. Often the changes cannot be observed on the fresh section, but are easily brought out after hardening in chromic acid preparations. At a later period there may be complete atrophy and shrinking of the diseased parts. The microscope reveals, at an early period, an increase of the neuroglia, granular cells, enlarged Deiter's cells, etc., and swelling or atrophy of some of the nerve-fibres, both axis-cylinders and medullary sheaths. At a later period the neuroglia is converted into a fine, wavy, dense connective tissue, and the nerve-fibres have largely disappeared.

As to the locality of these changes. They are in the posterior columns, in the posterior nerve-roots and posterior gray matter, in both of which diseased changes are probably found at a very early period. At a later period they may even attack the lateral columns and the ganglion cells of the anterior cornua.

What is the origin of these changes, and what their more exact localization? It has been supposed that the disease begins as a meningitis, and only secondarily affects the cord. This theory was based on the fact that in advanced cases thickening and degeneration of the pia mater in the posterior portion is almost always observed. But, as in several cases in which the cord could be examined at an early period of the disease no meningitis was found, this origin cannot be accepted. The changes in the meninges are probably secondary to those in the cord.

Let us study the more exact localization of the disease in the posterior white columns. A number of cases have been reported in which the diseased changes of an early period were very carefully examined. I know of only four such cases, one of Pierret, one of Westphal, and two of Strumpell, in each of them the patient dying of some other disease while the locomotor ataxia was still in its early stages. In each of them the disease was most marked in the lumbar region, where it appears to have had its origin. It was here limited to a portion of Burdach's column. In higher parts of the cord the disease of Burdach's column was less extensive, while in the highest part it limited itself to the column of Goll. I here present you the plates representing the disease on different sections of the cord in the cases of Pierret and Strumpell. I present you also a number of plates (nine cases of Strumpell's), representing the disease at a more advanced period. If you will carefully study these plates, you will observe that certain parts of the posterior columns are always attacked, that other parts are almost as universally spared; for instance, in the lumbar region the most anterior parts of the posterior columns, in the cervical region the most external posterior portion, are always spared. In these two anatomical sections, which I present to you, the one from the lumbar, the other from the cervical region, you will again see that about the same parts are spared. You will also observe that both in these anatomical sections, as well as in all the plates presented, there is an almost exact symmetry of the disease on the two sides. These facts, the symmetry of the disease, its beginning in certain parts, its attacking certain parts and sparing others, cannot be explained by a diffuse myelitis, and are sufficient, I believe, to prove that we have to do with a systematic disease. But it is more difficult to define the system or systems attacked. The most easy and natural explanation is, that the disease begins in the posterior root zones, in that part of Burdach's columns where fibres from the posterior roots penetrate the gray matter, possibly attacking at the same time the nerve-fibres in this part, and their continuation in the roots and in the gray matter. It begins, then, in this posterior root zone as a primary disease, perhaps first in lumbar, later in dorsal and cervical regions. And from this primary source the disease extends inwards and upwards; inwards to the gray matter, and even in those rare cases where the ganglion cells of the anterior cornuæ are involved, Charcot believes that it is through an extension of the disease along some fibres of the posterior roots. Possibly the disease in the lateral columns is also to be thus explained. Upwards the disease extends into Goll's column, thus reaching to the medulla.

While this seems the easiest explanation, it is not universally accepted. Strumpell believes that we have to do with a combined systematic disease, and that both Burdach's and Goll's columns, are each primarily affected. It must be acknowledged that we know too little concerning primary or secondary degenerations to be able to distinguish them from one another by mere appearances. Then we must remember a surmise of Westphal, that the posterior column is composed of a number of different systems, and perhaps one after another of them is attacked in this disease.

Another question we must consider is, What is the nature of the disease? Is it an interstitial or a parenchymatous myelitis, or is it primarily merely a degeneration of the nervous elements? We have seen that both the neuroglia and the nerve-fibres are affected, and the mere appearance does not enable us to determine in which the changes were primary. But if we have to do with a systematic disease, this can only be accounted for by a primary disease of the nerve-fibres. But whether this primary disease be an inflammation or a degeneration, our present knowledge does not enable us to determine.

And now we approach the second part of our subject, how far we can explain the symptoms by the pathological changes. What we have already said of our knowledge of the functions of the cord will lead you to infer that such explanations will be largely conjectural. Charcot explains the main symptoms in this way. The disease, when limited to a part of Burdach's column, produces the lightning pains; when it extends to the posterior cornua and roots, it produces ataxia; when it involves the gray matter and posterior roots, it produces marked anæsthesia. This explanation, plausible as it appears, is largely arbitrary. And it may be more nearly correct to attribute the symptoms at these various periods rather to the intensity than the exact locality of the diseased areas. While the disease is very limited those nerve-fibres are only irritated which, when the disease becomes more extensive, are now destroyed.

We may in a general way state that the pains, parasthesias, etc., are due to irritation, the anæsthesia to destruction of fibres of the posterior roots, either in the roots or in some part of the cord. Paralysis is due to involvement of the lateral columns, muscular atrophy to disease of ganglion-cells in the anterior cornua. As to the explanation of the symptoms on the part of genital functions, bladder, rectum, or of the trophic changes we are still entirely in the dark.

Most interest has been taken in the explanation of the prominent symptom, the ataxia, and concerning this various theories have been promulgated. One is that it is due to disturbances of the reflexes, and therefore to a loss of control on the part of the cord. Another is that on account of the impairment of sensation, cutaneous, muscular, etc., centripetal impressions from the periphery to the coördinating centres in the brain are not properly received, and therefore the guiding influence of the latter imperfect. In other words, on account of deficient knowledge of the limbs there is a loss of the power of controlling them. According to a third theory, there are in the cord, in addition to the fibres conveying the motor impulses, another set of fibres from the coördinating centres, which serve to regulate muscular actions, and these coördinating fibres are destroyed in this disease.

I do not wish to give the various arguments for or against these various theories. Each is far from being established, and there are serious objections to all. But it seems to me, rather than supposing a special set of motor fibres in addition to those which convey motor impulses, far easier to believe that there is a loss of control from peripheral sources, either on the part of the cord through impairment of the reflexes, or on the part of the coördinating centres through impairment of conscious sensations, or from both causes at the same time.

As to the involvement of the cranial nerves, the amaurosis, ocular paralysis, etc., we can give no definite explanation. No anatomical connection has been found between these nerves and the disease in the cord, and probably none exists. We can more easily believe that there is some general condition which at the same time predisposes certain parts of the cord and certain cranial nerves to disease.

For one symptom we can give a more definite explanation, that is the absence of the patellar tendon-reflex. Westphal has long supposed that this was due to disease of the posterior columns in the lumbar region. He was recently enabled to carefully examine the cord in a case where the disease was at such an early stage that no other symptom but the absence of the patellar tendon-reflex was apparent, and he here found the pathological changes limited to a portion of Burdach's column and most marked in the lumbar region. In the two cases of Strumpell's already mentioned, the disease was also in its early stage, there was an absence of the patellar tendon-reflex, and pathological changes were found in the same part of the cord. And now we know why this is usually the first symptom of locomotor ataxia, because the pathological changes usually begin in that part of the cord which produces it.

ORIGINAL ARTICLES.

NEW ENGLAND MALARIA—FROM WHENCE?

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The occurrence of malaria in certain parts of the United States more frequently than heretofore, and in some sections not constantly disturbed thereby, has given rise to some hypotheses as to causation which invite and deserve the careful analysis of every student of etiology. Whenever we are called upon to deal with a dyscrasia in which it is admitted that the morbific principle is unknown, there is great temptation to that excursus of scientific imagination, to which even scientists are sometimes prone. Like most beguiling infatuations the scholar is lured in a most inquisitive and intoxicating way into the arbor of his delightful reverie, until the very enchantment of his myth leads him to cajole himself with the idea that he is still in the region of facts, and has arrived in his delectable land by a new road surveyed with the exactest care, and laid out in accord with the precise rules of a logical analysis.

One need only to turn from some of these new and modern views to the records of the authors and practitioners who have for a century been dealing with malaria, to see how the minority hypotheses of the past are reproduced in the present.

We are first informed that there are many marshes and lowlands rich in vegetable decay in which malaria has never been known to prevail. If this were a new fact, it might have some influence in modifying a belief in the paludal relations of malaria.

But this fact is no more prominent now than it has been during the whole period in which this disease has in many countries, and under diverse circumstances, been subjected to the most careful judgment and experience of the medical profession. Malaria, says Bartholow, is called "marsh miasm," because of the abundance of this poison about marshes. But not all marshes produce malaria. The "Dismal Swamp," for example, is free from marsh miasm, "although apparently well adapted to produce it."

It is because nearly all observers and authors have all along been able to admit this, and yet maintain the view of the connection of marshes with malaria that we have one of the best historical evidences of the correctness of this view. Having given full weight to all these facts, experience has yet confirmed a verdict as to this marsh relationship.

Another statement, of which again so much is made as to give it an air of novelty, and so a force against an old truth, is that malaria occurs on the hilltops as well as in the valleys.

Score upon score of such facts were also in possession of our medical fathers and ourselves, and were given due consideration in making up the judgment of historical experience (see *Dictionary of Medicine*, Quain, 1882, article Malaria).

So long as the doctrine of the diffusion of gases or the fact of prevalence of winds lasts, so long will it occur that particles of disease will be wafted; that by proximity or varying direction of winds or changes introduced by the removal of forests, the cutting of channels, the changes of seasons and of temperature, and the greater travel of the people of the hills to the valleys, there will be the increase of occurrences which have been well understood and accounted for before this, and of which the vacillating increase is equally susceptible of explanation.

It was long ago found that changes made by man high up in the hills gave rise to some of the same conditions once confined to the valleys; that artificial channels of conveyance have been made from sources near at hand; that the malarial zone is moved above some old isothermal line not by the change of latitude, but by a change of temperature and of vegetation which is equivalent thereto, and so the apparent advance has been a coming down of the hills to the conditions of the valleys, rather than a change in the conditions of malarial distribution. The same is true of the next leading statement, viz., that malaria is found to prevail in latitudes where it was once unknown.

It is intensely interesting to turn back to the authorities of the last fifty years, and find whole pages of close statement, which show how well these and similar facts have been considered and given their due weight and proper explanation. The sustained view was held not because they were not cognizant of these facts; not because they had settled to a belief which nothing could shake, but because the opinions entertained accounted for the largest number of facts and were not nullified by explicable variations.

Indeed, the tendency to deny the influence of any local cause, for any disease on the part of the resident community, is one as old as the days of Hippocrates, and could never have been expected to be overlooked by a certain inventive race to the north of Mason's and Dixon's line.

The only really new thing which has given an impetus to the hypothesis as to the migratory or portable character of malaria is that which relates to the cryptogamic origin or particulate entity of many diseases. As soon as the view fairly took shape that even such a disease as this depended on a specific plant-life, so soon it was an easy generalization that all marshes do not produce the same forms of plant-life; that some might not happen to have the special one that causes malaria, and that in places where it did occur you must not merely prove a marsh, stagnant water, abnormal decay and heat, and a rising miasm, but you must also show that this particular marsh has this particular plant. Hence, it is probable that, for a score or more of years, yellow fever, typhoid fever, typhus fever, diphtheria, and several other diseases, whenever occurring in a foul locality, will be insisted upon by a very respectable minority as not being in any way connected with local conditions, but as having arrived from somewhere else. In certain rare instances it will be true; in certain other instances they will arrive through channels provided by the locality; in most, they will depend for their virulence and for their continuance on the pabulum of local conditions. In all such, if not before native, they will become so, because they find all the conditions they found in their own habitats. Oftener they will find themselves among their own species of plant-life, and that they have but added to the intensity of the malaria-breeding atmosphere. Just as it may be true of some very common marsh-plant that it may not be found in some particular locality where you would expect to find it, it is equally true that you are almost certain to find it indigenous there; but if you do not, it is very sure to become so. Also, that if you would be rid of it, your expectation of riddance and relief is far better in changing the adaptation of soil and locality thereto than in trusting to its not getting in from an adjacent township or State.

The prominent argument that has been more recently put forth in favor of the independence of malaria of local and paludal conditions, is that malaria has appeared in places where it was unknown; that it seems to have cycles of appearance, and to be intermittent in its continuance. Also, it is claimed that its steady progress can be traced as by a moving wave, one year after another reaching places in succession, and so showing a foreign origin.

The appearance in places before unknown is so easily accounted for by the changed conditions of locality, of forest and soil, of excavation and infilling, of rain-fall and water-courses, of climate—and especially temperature—of moisture and winds, of neglect or cultivation, of immigration and increase of travel and population, that these seem quite adequate to explain many of the asserted facts.

The intermittency of prevalence very readily impresses some minds, since it is very natural to reason that causes constant in operation will have a constancy of result. But when we come to know that malaria is greatly related to changing conditions of season; that the conditions of low lands are constantly being modified by the height of the level of soil-water, and by its varying alteration in different seasons; that plant-life varies much in exuberance from season to season, and that a few days of excessive temperature or dryness may be the deciding point, it is not wonderful that there is not more uniformity of result, and that the varying seasons and conditions do not register the same number of cases. We have seen an instance in which for years there has seemed no prominent result from alluvial deposits and interrupted water-courses, in which, owing to the killing of vegetation by peculiar midsummer heat and drought, nine-tenths of the people of a population of three thousand have been seized with various forms of malarial disease, and where the demonstration was too palpable and too stultifying to permit the hypothesis of invasion.

I have lived and practised in a district where bilious fever prevailed extensively in the year 1828. Gradually there came to be a cessation of periodic fevers. I had practised for twenty years in that locality, scarcely seeing a case of intermittent but for a single year, and yet twice in the last ten years seeing seasons of great prevalence of the disease.

I can point to an inland town where malaria was never known until some six or eight years since, but where it now prevails extensively from year to year, and yet it has never occurred to account for it by invasion. How it *invades* is well described by Dr. Chapin, of Providence, Rhode Island, in the Fourth Report of the Rhode Island State Board of Health, 1881, pp. 223 and 224, where it is shown how local causes have accumulated in many places once exempt, and how a marsh which has long existed has become stagnant or fever-producing by more recent changes and climatic variations. Also by Dr. Snow, as quoted in Sixth Report of the New Jersey State Board of Health, pp. 12, 13.

To most observers the yearly conditions had been the same until closer investigation of course and changes had been made. The hypothesis of the progressive travel of malaria has been so pressed into prominence that this deserves a careful study. This cannot be better reached than by an examination of the field in which it has been especially claimed to be illustrated.

The term Yankee has very properly ceased to be a term of reproach, and become one significant of high inventive genius and ready wit. It has never been more aptly and acutely displayed than in the energy and sophistry with which it is attempted to show that Connecticut has been invaded by malaria from New Jersey, and places to the south and west. Plausible explanations have been sought, and deductions made on an insufficient number of data, so that very clever physicians have kept watch while week by week and year by year it has come from the salt meadows of New Jersey and the dark jungles of New York, reached the pure and elevated shore of the Sound; the non-miasmatic highlands along the lofty banks of the Connecticut River; the sparkling, dashing water of the straight-running, unalluvial, roaring Housatonic, and actually insinuated itself amid the mountain fastnesses of Milk Street, and the Springfield tablelands.

We readily admit that to this there has been great temptation. There were enough loose facts from which to frame a hypothesis, and the sharp interests of manufacturers made it very easy to be self-deceived.

It would never do to admit that the busy mills and manufactories were producing malaria as well as merchantable fabrics. It is in evidence that almost every quarter of a century, since mills began to run in New England, has been signalized by some important lawsuit in which the most recent and plausible hypothesis has been made available to shift the etiology of malaria. As we now have the doctrine of germ portability, it is easy to assume that all evils come from afar, and to construct an artificial wave-chart out of a few facts and abundant evolution of inner desire. While we cannot doubt the honesty of these hypothetical inventors, we do not find that the facts are presented in such way or with sufficient data to command assent.

While it is no doubt true, as it has been true in other States, that the disease is not equally prevalent at all times; that it appears often in a place north or south, or east or west, of another before it appears in that place; it is also true that there may be causes not remote in distance or in time to account for this.

We do not claim that there are no mysteries attending malaria, but they are such as obtain as to many other diseases. John Simon did not do despite either to pathology or to experience when he spoke of a whole class of diseases as filth diseases. Yet he would in very many cases be totally unable to define the exactness of relationship, and might be bothered now or then by the statements of many a one as to a place in which, notwithstanding the apparent conditions, no form of filth disease had occurred. Neither a cessation nor sudden recurrence of malaria should confound the great class of witnesses who recognize a connection between enforced conditions of vegetable decay amid moisture and heat as having a causal and prolific relation to periodic fevers.

These may be transferred from place to place, over a larger expanse of territory than once conceived, since more rapid transit may occur to things as well as men. There may continue to be in the future, as in the past, swamp conditions in which undisturbed nature has so harmonized and adjusted relations that the very growth and decay are conservative of health.

But this does not set aside the fact that the habitat of malaria is still just where it has been supposed to be, and that the only radical remedy, therefore, is to preserve the water-courses, or compensate for the disturbance; to study and regulate the soils and water by proper and efficient drainage; not to make great changes by the felling of forests, the blocking-up of streams, the construction of roads, or the methods of artificial vegetation, without recognizing that such disturbances must have adjustments, or else the disturbed equilibrium will tell on the health of the vicinity.

Let us now examine into the alleged invasion of New England by malaria. We need not refer at length to the evidence that malaria showed itself in early days native and to the manor born, and earlier than in any other known localities in America.

The monograph of Dr. Oliver Wendell Holmes, published in 1846, is so full in its detail, and so accurate in its historical references, as scarcely to need additional testimony.

The sanitary report as to epidemics in Massachusetts, made in 1850 by the commissioners appointed relative to a sanitary survey of the State, refers to various outbreaks, and gives some details. We trace it along at such connected intervals as 1634, 1647, 1655, 1658, 1668, and as recognized as indigenous to Connecticut in 1671 and 1678. In 1683 it was at Cambridge and Salem. (See *Boston Med. and Surg. Journal*, Jan. 26, 1853.) The summary of Dr. Bronson gives evidence of its endemicity at Fairfield, Norwalk, and other points, so, as he says, "*there is good reason to believe that the towns along the Sound were affected during the seventeenth century.*" It is to be remembered, too, that just at the last half of the seventeenth century, settlers were constantly arriving in New Amsterdam, and the Dutch and English and Scotch were emigrating to New Jersey, without any signs of it there. It had not as yet settled down from New England upon Long Island, New York, or New Jersey. Indeed it is quite probable that Gov. Cartaret owed much of his success in promoting emigration from New England to New Jersey to the greater healthfulness of the latter, and because the people were seeking riddance from the local periodic fevers which had not been prevalent with the early settlers in the Middle States.

For a time, at the beginning of the eighteenth century, we do not hear so much of the disease, because the smallpox came into such prominence, and probably because malaria had become so indigenous as not to excite so much attention. Yet we hear of it in 1725 as so serious as to give rise to a litigation lasting until 1730, when the dam on Bantam River, near Litchfield, was removed. In 1750 the Bethlehem epidemic followed the draining of the pond. We have frequent references to sickly seasons from 1740 to 1760, in which there is good reason to believe that the fevers were of this type. Thus, in connection with the terrible Pepperell fever of 1755, Butler's *History of Groton* says: "The cause of the Pepperell fever was thought to be the miasma arising from decayed vegetable matter. The swamp or meadow of John Shattuck, near Henry Jewett's, had been overgrown with bushes and various vegetables; and in order to kill them, and bring the land into a state of cultivation, a dam was built, and the swamp overflowed with water. When the water had been drawn, and the vegetable-matter exposed to a summer's sun, the stench was very offensive, and extended for several miles around" (see Shattuck, p. 68).

We have no map showing by what lines this great sickness advanced from New Jersey and New York until it struck Pepperell swamp in 1755.

From 1764 to 1780 we are told that there were many years of sickness, but we have few facts preserved to show its extent. The famous suit as to New Milford in 1799, however, is valuable as bringing out the fact that for long years before, and so often and in so many places, malaria had occurred at intervals for a half-century, as not to satisfy the jury that this one mill-dam was the cause. Places are named and particulars given. The excellent summary of Dr. Chamberlain, in the fourth report of the Connecticut Board of Health, pp. 142–147, commencing, "On the other hand," . . . and ending with the sentence, "These items are only given to aid in proving malarial diseases to have been permanently endemic in the region in question, which also includes portions of Litchfield County," would of itself be enough to show the prevalence of malarial fever with as great constancy through the period up to 1860 as is common in those States in which malaria has been claimed as so endemic as to be a source of it. The description by Dr. John Warren of the Boston and Sheffield fevers of 1796 shows that a very great portion of those taken sick were situated near extensive flats, and that Hubbard's Pond and the repeated Sheffield fever were associated (see Shattuck, pp. 71 and 72). But, besides this, we find that all Connecticut and the westerly part of Massachusetts, about the year 1800, were busily discussing—as they are now—"whether overflowing lands for mill-ponds or other purposes generated a malaria which was unfavorable to health" (see Shattuck, *Sanitary Report*, 1850, p. 73). Indeed, if any one should start the hypothesis that Massachusetts and Connecticut were the original habitats and breeding-places of malaria for the United States, and that by winds and by New England emigration the disease had reached adjacent States, he would need no better description than is to be found in the *Memoirs of the Connecticut Academy of Arts and Sciences*, vol. i. p. 131, being the account given by the Hon. David Daggett of the Ruggles trial (January, 1800), in the court of Litchfield County, Connecticut. It related to a mill-dam which had long caused malarial fevers. Saulsbury, Colebrook, Roxbury, Kent, Great Barrington, West Stockbridge, and most of the towns of the Housatonic, were then, or before, named as habitats of the fever, while it had always, as far as runneth the memory of man, been the disease of New Milford. Already the interests of capital had begun to oppose the theory of its relation to overflowed lands, since many a New Englander was looking for a mill-site. It is no doubt true that, after the great prevalence of malaria in Connecticut and Massachusetts for several years, about up to 1805, there was not so epidemic a prevalence of it, and other diseases seem to have been more general. Yet from the records of medical societies, of courts, and of medical men, there seems to have been just about the same prevalence as in the Middle States. Thus, we notice that in 1822 reporters for the different counties in the State of New Jersey speak of a prevalence of "intermittents" *after an exemption* of twenty years.

In 1835, a circular was extensively distributed in Massachusetts, inquiring into the history of intermittent fevers. Dr. Bowditch, in his *Hygiene in America* (1877), says: "In reference to Massachusetts, I will report that there is no evidence of any disease generally distributed over the State, having ceased to exist. . . . It is admitted, however, that intermittent fever *formerly* prevailed in certain localities where now it is not known. This is due undoubtedly to the cultivation and drainage of the soil." This accords with the statement of Bartholow, in his *Practice of Medicine*, that "the telluric and other conditions favorable to the development of malaria exist largely in this country along the Atlantic seaboard as far north as Boston." It had the same history of prevalence and absence from 1750 to 1850 that is recorded of numberless localities.

Where the population had become fully acclimated, and there was little or no immigration, and little change of vegetation, of forests, of water-courses, and no upheavals or excavations, there was, no doubt, notable absence of the disease. On the other hand, the lines of new population, of improvement, and those where mill-dams and other changes were made in due time recorded the effect during a period somewhat limited by the shortness of the warm season. The Housatonic kept well up with the Delaware and Long Island Sound. The Connecticut River was more prolific in chills than the Hudson River, near New York City (see description of the Housatonic in Holmes' "Prize Essay"). It would be well for those who dispute the effect of local causes in high latitudes to read the report of the Board of Health of Ontario, Canada, on "The Malaria Epidemics of 1882 in Coboconk and Madoc" (see Annual Report of Provincial Board of Health, Ontario, 1882). Its facts are most significant and illustrative as to how malaria may originate even in New England.

So far as we understand the views of those who would discredit the paludal hypothesis and adopt the wave or migratory view, the present malarial wave began its surging about the year 1860, although it was not until 1865, or about the period of the return of thousands of troops from the war, and great interchanges in the internal life of New England, that, to use the words of another, "Each year saw new territory invaded" (see Chamberlain, p. 144).

A paper in the last Report of the State Board of Health of Connecticut (1882), pp. 205–211, is accompanied by a map to show the extent and direction of the annual progress of "the present malarial epidemic during the past twenty-three years." The map is based upon a classification which differs from that of the same report the year before in *fifty or more names of localities or years of occurrence.* In the former year, the Secretary of the State Board of Health of Connecticut had so interpreted his statistics as to have concluded that, "*although not endemic generally in Connecticut, intermittent fever was present in some part of the State, saving the western and southern, nearly if not quite every year since colonial times.*" That is true, and if one cares to study even these records and others in our knowledge, it will be found that the southern part of Connecticut must nearly have touched the Massachusetts line, and the western part extended quite east of the Connecticut River, and that its lesser prevalence in Eastern Connecticut is to be accounted for without resort to the second author's hypothesis of "successive waves, and later by the concentric lines of its annual progress," which, the author says, indicates an advance in one definite direction independent of any known or recognized influence, whether atmospheric, telluric, magnetic, or climatic. To find out how dependent on some of these it had been, he needed only to have turned to the paper of Gen. Veilé, in the former report of the Board, in which he accurately states a sufficient number of facts as to many of these localities, and also as to causes of its occurrence and progression because of changes made. From page 228 onward, there are some very exact statements as to the obstruction of whole lines of water-courses by railroads, and of changes in inland and higher towns, which do much towards explaining the advance both in territory and in prevalence.

We thus find that local causes had accumulated all along the Connecticut shore of Long Island Sound, and penetrated as really and as progressively up the rivers and into the hills as malaria had done.

The author, after a series of statistics so incomplete as to be misleading, projects an original map to show the ærial and telluric significance of this wave hypothesis; how by successive gyrations it has lighted from afar on the hitherto unsmitten New Milford, the cleanly North Adams, and actually affected the valley of the Housatonic.

The map of Paris which Mark Twain constructed for the diversion of strangers, and which had numerous certificates as to its boldness of conception and originality of design, may be profitably studied side by side with this excursus, which is fortified by graphic and linear delineation of the most vagrant character. Then the author, without giving the names of observers or their own statements, and with but one and a half pages of comment not based on any complete analysis of statistics, proceeds to say "*that we may be sure that ague is not produced by heat, moisture, or decay arising from ponds, reservoirs*, swamps, or low ground overflowed by freshets, or exposed by evaporation," however handy the hypothesis may be for the (p. 206) daily use of "talkative laymen and lazy physicians." The author seems all along to have forgotten (p. 207) what had occurred all this time along the southern border of Massachusetts.

The article on mill-dams and other water obstructions in the Report of the Massachusetts Board of Health for 1872 has many local facts that do not look like a foreign invasion.[1]

While it is quite true of towns in Connecticut, as everywhere else, that we do not quite see always why one town has more intermittent than another, why some regions are comparatively exempt, yet we do see that malarial fever in Connecticut and Massachusetts is no new thing. We think many other localities can, in a general way, trace lines of direction, as when it prevails in one place, and favoring winds transmit it to another before a local condition has caused it. But from any evidence before us, we fail to see that there has been an "invasion" of successive waves, "north-east by north," slightly curving to the left, "for fifteen years, then a lateral radiation; that it first touched shore on Long Island Sound in two places, with a third invading point at Milford." *New Milford*, we are told in the one report, was reached in 1876, and by the other in 1877, whereas the disease had been indigenous in both places far back, although not being found each year. Dr. Knight, of New Haven, declared it *never altogether* disappeared from the lower Housatonic, and that it was sporadic as far up as Northampton.

Yet notwithstanding these and scores of other facts, this map projects its contour lines; seeks to make them all converge to its hypothesis, and reaches its climax when it says: "Now, by following it [these lines] backward, we naturally reach that part of Long Island where ague was rife from 1850 to 1860, and, continuing the course, it carries us to New Jersey." *It is not too much to suppose that it came over from Long Island and New Jersey, etc., and possibly further south, etc.*

"Not too much to suppose that it came over." Innocent New England, where no fever yet was born. *Invaded*, and never productive of chills and fever. I admire this constructive ingenuity. It fits in so admirably with the desire of mill-owners; it is profitable as a diversion to juries and courts, who would find excuse for prevalent evils by declaring that they come from afar. It is a hypothesis around which can be marshalled a host of phantasies and analogies. The shaking martyrs of the Connecticut and Housatonic can now pass from the cold stage into the hot and the sweating stage, declaring that chills and fever were never heard of until a wavy breeze of pestilence struck the high and healthy shore of the Sound, and invaded the lofty rivers, the upland marshes, the sunny forests, and the dry mill-swamps of New England. A marked exception to the imaginary wave line which occurred in several towns twelve years too soon is accounted for by the nearness of that part of Connecticut to Westchester County, New York, "*where ague is perennial, and may have received its impulse.*"

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[1] See also as specimens, Notes on Health of Towns in Massachusetts, 1872; Actor, p. 306; Cantor, 1870, p. 310. How often was the word typhoid used in a loose sense for fevers that were really malarial? See Halifax Huntington, p. 316, 1872, and very many such cases in the Yearly Notes on Health of Towns, also Drainage for Health, 1873, Mass. Rep., and various other evidences of local periodic fevers in the "Health of Towns" for each year.

In this brief study of graphics, we confess to have come across a series of interesting facts which incline us to a far different hypothesis. It is that the Housatonic River in particular and Connecticut specially were the original habitats of this great pest.

As iron filings gather around a horse-shoe magnet, facts seem to be gathering to show that the Middle States were for scores of years free of malaria, while it was desolating, or irritating, or demoralizing the people of Massachusetts and Connecticut; that finally it was introduced by the migration of New England people and by the winds on the shores of Long Island; that it reached then Staten Island and the shores of New Jersey. The Dutch population of New Amsterdam and of Bergen County long withstood the general effects, but finally it obtained a foothold in Westchester and Hudson Counties. The great portion of this State is still exempt, and where it does prevail it is often with long intervals, and there is a strange correspondence between the dates of this malarial wave and its progress southward through the State. We yet may be able to show that the occasional marshes of New Jersey do not breed malaria until it is introduced from places further north. While we must not fail to protect ourselves by the most thorough drainage and by attention to all the laws of health, is it not high time that we appeal to the general government to make such a sanitary survey of the lands, marshes, and rivers of New England as will map out the malarial districts, and then call upon our New England brethren, by drainage and free water-courses, to deliver not only their own regions, but all the Middle States, from those risks of dissemination and extension of malarial particles to which they have so long exposed them?

While we do not at present commit ourselves to this hypothesis to all the extent which possibilities or probabilities might admit, and have not yet constructed an accompanying map, we do claim that the New England invasion hypothesis, which, we are happy to say, has been accepted by comparatively few students and statisticians among medical practitioners, is not sustained. There is need either to fall back upon the effect of local conditions or to construct a hypothesis which, if less comforting down East, will be nearer in accord with local facts and with he conclusions of skilled and well-tried observers.

POISONING BY TWO DRACHMS OF ARSENIC; RECOVERY.

By H. B. HEMENWAY, M.D.,
OF KALAMAZOO, MICHIGAN.

W. O., male, married, colored, age twenty-six years, hostler, generally strong and healthy, went, Monday morning, August 27, 1883, to a drug-store, and bought two drachms each of tartaric acid, powdered cubebs, and arsenic. He said that one of his horses was lame, and that he wanted to make a liniment for his foot. About eleven o'clock he took all of the arsenic and twenty-five grains of the tartaric acid, with suicidal intent. He soon after drank some water, and then vomited. He said that he vomited very little, but one of those in the house said he threw up about a quart of frothy mucus. After that first time of emesis, he did not throw up more until after the physician saw him at one o'clock P. M. At that time, the patient was lying upon his back, with eyes shut, frothing at the mouth. Temperature normal, but had complained of being cold. Pulse 80, full and strong. Ordered ℥ss of mustard, to be given in water. This produced free emesis, but the family were not satisfied, and repeated the dose in the absence of the physician. At two P. M., the doctor gave freely of the sesquioxide of iron, and also six fluidrachms of castor oil. At four and a half P. M., no movement of the bowels having occurred, ʒiss of magnesii sulph. were given. Patient complained of burning pain in the pit of the stomach, extending also, though less intensely, over the entire abdomen, and behind the sternum to the throat. Head clear; said his tongue felt thick. Before seven o'clock in the evening, he had had several movements from the bowels. Urine passed freely. Ordered milk diet.

August 28. — 9 A. M. Patient passed a very good night, but did not sleep much until morning. Pulse 70, and weaker than the day before. Complained of chills, but temperature was normal. Complained of cramps in the abdomen and in the legs. Pain in the small of the back, on the right side. (When the patient vomited the day before, he lay upon his left side. The probability was, therefore, that the pain in the back was due to the straining at the time of emesis.) There was no headache. Patient complained of the thick and heavy feeling of his tongue. Urine higher colored than normal. No movements of the bowels since seven P. M. the day before. In the afternoon, ordered another dose of salts for him, which brought on three movements. No appetite.

29th.—9. A.M. Pulse 50, weak, and not full; patient complained of feeling weak; hands trembled; tried to sit up, but his head felt so light he laid down again immediately; had slept a little through the night; cramps troublesome in the legs; pain great in the right side of the back; patient restless and constantly picking at the bed-clothes; general tenderness over the abdomen; urine passes freely; no fulness around the eyes.

℞.—Tr. Digitalis,
Tr. Nucis Vomicæ, . . . āā ♏iij.
To be taken once an hour while awake.

4 P.M.—No special change.

30th.—9 A. M. The patient had passed a good night, slept well, and had taken a smoke of tobacco; appetite returning; still very weak; pulse 60, fuller, and stronger than the day before; great trembling of the arms and hands. The abdominal tenderness was not so great; cramps in the limbs and pain in the back still continue.

From this time until the patient was discharged, September 3d, he continued to improve rapidly, so that on the last-named day he came to the office, nearly a mile from the house. Though not as strong as usual, he was feeling pretty well.

From the beginning of the case to the end, there was no headache, no abnormal fulness around the eyes, no suppression of urine, but the urine was higher colored than usual. For the first two or three days there was some thirst. The most prominent symptoms in the case were the slow and weak pulse, muscular tremors, cramps, abdominal tenderness, and burning pain.

One other point in the case may be instructive. As has already been said, the patient bought two drachms each of arsenic and tartaric acid. The first article was put up in two papers; upon the outer one of these was the label "Arsenic—Poison," with the name of the druggist. For some reason, possibly because of the breaking of the paper containing the tartaric acid, after he had taken the arsenic he emptied the tartaric acid into the paper bearing the arsenic label. The man's sister-in-law snatched this package from him and delivered it to the physician as soon as he came. The physician went immediately to the drugstore and found what had been purchased, and then weighed the tartaric acid to find how much had been taken. Both arsenic and tartaric acid are white, and though they are quite easy to distinguish between, yet being labelled "arsenic," in his haste he did not doubt that it was arsenic, and it was not until the evening visit that he discovered his mistake. In this instance no harm resulted from the error, but under some circumstances the result might have been different.

GALVANIZATION IN ACNE PUSTULOSA.

BY E. STUVER, B.SC., M.D.,

OF RAWLINS, WYOMING TERRITORY.

MR. C. A. P., æt. nineteen years, formerly of Boston, Mass., consulted me on October 12, 1882, and gave the following history: For about six months he has been troubled with an eruption on the forehead, cheeks, nose, and in a less degree on the chest. The eruption consists of quite a number of papules, about the size of a split pea, which inflame, suppurate, and in a week or ten days subside, leaving dark-colored cicatrices. This was soon followed by a new crop, and the same process repeated. Although he had used numerous remedies, the disease continued to increase in gravity, each crop consisting of a greater number of larger sized papules and pustules.

At the time of consultation, the following condition was noted: Face covered with numerous, large, inflamed papules and pustules, the intervening portions of cuticle being of a dark-rose color, and having a decidedly unctuous appearance. A number of dark-colored cicatrices and a great many comedones, especially about the nose, were noticeable. General health good, and no other trouble discoverable. His diet was carefully regulated, and the following treatment prescribed:

After carefully washing the face with some mild soap, ℞.—Hydrargyri chloridi corrosivi, grs. iv; Spts. vini rectificatæ dil., f℥j; Aquæ destillatæ, q. s. ad. f℥viij.—M. To be applied twice daily. And ℞.—Pilulæ arsenici iodidi (each) gr. $\frac{1}{100}$; one or two after each meal. This treatment was faithfully followed until October 28th, when no improvement being manifest, it was determined to try galvanism.

From October 28th to November 28th inclusive, thirteen applications of a current from six increased to ten cells of a Bartlett galvanic battery were made in the following manner: The positive sponge-covered electrode was placed over the stylo-mastoid foramen, or in that region, and the negative electrode brushed over the affected parts of the corresponding sides. After an application of this kind, lasting from five to ten minutes, the developing papules were touched by a conical-pointed electrode connected with the negative pole, the sponge-covered positive electrode being placed near the spot operated on; the most prominent comedones were then expressed, and finally the sponge-covered electrodes were applied for a few minutes as in the beginning. This order of application has several advantages, of which the following may be mentioned: the application of the sponges to the face as the first step brings into greater prominence the developing papules, as well as the comedones, which latter are more easily expressed after than before this application, owing doubtless to the contraction produced in the muscular elements of the skin. The final application of the sponges is for the purpose of increasing the tonicity of the sebaceous follicles, which is most effectually accomplished after the removal of their secretion.

There was some improvement during the month, but not very marked. The eruption began to be more discrete, and the papules, with their supervening pustules, smaller in size and more limited in duration; the skin also began to assume a more healthy appearance. While the application of the small conical electrode directly to the developing papules did not always prevent their further development and pustulation, it nevertheless had this effect on a considerable number of them, and in all cases exerted a decidedly beneficial influence in diminishing their size and abridging the duration of the eruption.

During December eight applications were made, with somewhat slow but constant improvement. In January, 1883, five applications were made, and the improvement was very marked and satisfactory. In February the current was applied four times, and the last application made March 6th, at which time the eruption had entirely disappeared, and the skin was of a very excellent color indeed.

I saw the patient July 2d, and found him free from the eruption, and highly gratified with the excellent results of the treatment.

THE VALUE OF PICRIC ACID AS A TEST FOR ALBUMEN.

BY CHARLES A. COOKE, M.D.,
AND
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In making a series of observations on the character of urine in *malarial* cases at Bay View Asylum, picric acid and heat and nitric acid were used as tests for albumen.

After examining quite a large number of cases, we observed that while heat and nitric acid gave negative results in every instance, unless complicated by organic disease of the kidneys, picric acid invariably gave the albumen reaction. We concluded that there must be some other agent causing the precipitate. Cinchonidia, being the uniform remedy prescribed, was judged to be the factor. Acting upon this suspicion, we instituted a series of experiments to corroborate our theory.

Experiment 1.—We made solutions of sulphates of quinine and of cinchonidia in water (grs. iv–℥j), to each of which a small quantity of picric acid solution (1 to 56, sp. gr. 1010) was added. In each case, a yellowish-white, albuminous-looking precipitate was immediately formed. A solution containing $\frac{1}{120}$ of a grain gave a decided precipitate, and one containing $\frac{1}{180}$ of a grain a perceptible cloud. Heat and nitric acid failed to produce a reaction in each case.

Having established the above facts, we verified our theory by clinical application.

Experiment 2.—The urine of each of twenty-five patients was carefully examined before and after taking six grains of sulphate of quinine, or of cinchonidia. We found that heat and nitric acid failed to give a reaction in every instance, and that picric acid, although failing to cause a precipitate previous to the administration of the drug, invariably caused one nine or ten hours after.

Experiment 3.—To prove that the precipitate produced by picric acid was quinine, and not albumen, we made a solution of quinine and egg-albumen in water, which was boiled and filtered.

To a portion of the filtrate picric acid was added, and a decided precipitate was thrown down. Dil. acetic acid, alcohol, and tr. iodine—Herapath's test for quinine—were added to the remainder and heated. On cooling, the copper-green crystals were deposited. Picric acid was then added to the supernatant fluid, and no precipitate was produced.

In view of the free use of quinine and cinchonidia and their elimination by the kidneys, the above proven fact becomes of much importance, and seriously affects the value of picric acid as a test for albumen, especially so as the appearance of the albumen reaction, and of that produced in non-albuminous solutions in which quinine exists, cannot be differentiated by the naked eye.

Quinine must now be added to the objections set forth by Rayner W. Batten, of Gloucester, in the *Lancet* for November 11, 1882, to wit: 1. That an excess of albuminous urine dissolves the precipitate formed by picric acid. 2. Potassium salts are precipitated by it. These three objections, we think, weaken the claim of Dr. Johnson, of London, in regard to the superiority of picric acid as a test for albumen in urine.

Bay View, Oct. 1, 1883.

ON MASSAGE: ITS EFFECTS AND INDICATIONS.

BY A. HEILBRUNN, M.D.,
OF PHILADELPHIA.

This method of treatment, which has only been recently revived, was known to Hippocrates, Galen, and Celsus for these authorities praised the value of the effects of massage in all diseases of the joints, both acute and chronic. In a work published in 1557, Oribasius endeavored to give a physiological explanation of the results obtained by massage. In the last decade, expositions of massage have been published in a few medical journals, the clearest and perhaps best of which is contained in a lecture of Professor von Mosengeil, of Bonn, in the Congress of the German Society of Surgeons, which may be found in *Langenbeck's Archiv für klinische Chirurgie*, vol. xix.

The credit of the revival of this method of treatment is chiefly due to Dr. Johann Metzger, of Amsterdam, who made a great reputation through the methodical employment of massage according to scientific rules, as well as by the brilliant results of his treatment. Besides him, Esmarch, in Kiel, and Mosengeil, in Bonn, are the most celebrated representatives of this method of cure on the Continent. I pass over the technique of massage, presuming that its principles are theoretically known.

The practice of massage requires, first of all, the possession of a soft, fleshy hand, as a hard and rough hand is not adapted for its exercise. The different manipulations must be frequently exercised, requiring also great patience and perseverance on the part of the physician; for the results are not immediate, but appear, especially in chronic diseases, only gradually. In comparison with other methods of treatment, however, such as electricity, mineral waters, hot baths, etc., they are quicker and more evident to the patients.

In many acute diseased conditions, such as distortions, contusions, etc., the ameliorating effect is almost immediate, which is not the case after the ordinary application of ice. In addition to which, the disturbance of the functions of the parts is corrected soon after the employment of the massage. The rule hitherto practised of ordering absolute rest of the injured parts, and the application of firm bandages to secure immobility, is not necessary when massage is employed.

Since the manipulations of massage, as intimated above, require great practice, it cannot be exercised by every physician, but must be committed to those who devote special attention to it, as in the case of electrotherapy and hydrotherapy, the indications, contraindications, and effects of which should be understood by every physician, but the technique only by those who have had considerable experience in their practical application. To them must be entrusted by the general practitioner the application of these therapeutic agents, just as he allows the physicians who have charge of bathing establishments to determine the special treatment of mineral waters and baths to patients committed to them.[1]

What now can massage accomplish in general and in particular, and what also are its indications and contraindications?

It is generally indicated in local diseases, in which an abundant quantity of nutritive material is necessary, or in which the excessive accumulation of the normal product of the tissue-changes, or pathological products, are to be removed through the centripetal channels, and, through the process of resorption and elimination, rendered innocuous to the system. Thus the effects of massage are explained by the contusion of the muscles and joints and the consequent extravasation of blood. It quickly removes pain and swelling, and acts safer, quicker, and also milder than ice, exemplifying the motto of Paracelsus: *Cito, tuto ac jucunde.*

By massage, the lumen of the veins and lymphatic vessels is not continuously contracted as by the application of ice, but they are momentarily affected only during the periodic stroke of the hand upon the contused portion of the body. Further, the manipulations of massage being made in a centripetal direction, the contents of the vessels are mechanically carried in the normal direction, and a vacuum is formed in their lumen, in which the backward column of blood or lymph, as also the blood extravasated by the injury, is absorbed. In this way, the pressure upon the nerves is diminished, or entirely removed, and the pain is relieved. By the removal of the extravasated blood, the obstruction to the circulation also disappears, while the tissue-change is increased, and, on this account again, the tissue elements, which are destroyed and have undergone fatty degeneration by the contusion, are quickly reabsorbed and regenerated, and healing rapidly follows. *Massage effects wonderfully soon the restoration of the functions of the joints which were entirely lost.* It prevents further the putrid destruction of the infiltrated portions of the tissues, the necessary nutrition of the injured tissues being provided for by the rapid removal of the impediment to the circulation in the blood- and lymph-vessels. Even in those cases of contusion without injury of the integument in which a part of larger dimensions stands in the relation of a foreign body, because every connection of vessels with their surroundings has been separated, massage, which exercises a pressure often repeated upon the necrosed tissues, and at the same time increases the absorbing activity of the vessels nearest the seat of the disease, causes fatty degeneration of the necrosed tissues, prevents suppuration, and is followed by the most favorable results.

For practical purposes, it appears to be especially important now to compare the effect of massage with the ordinary treatment of distortions and contusions of the skin, muscles, joints, and bones with application of ice, and the use of compressive bandages. As is well known, the object of the application of ice is through the irritation of cold upon the nerves, and further upon the skin, muscles, blood, and lymph-vessels, to contract them, to decrease the quantity of blood in the tissues, as well as to prevent inflammation. Actually, the swelling is soon diminished by the application of ice, and the pain is relieved. But the diminution of pain and swelling does not continue. There occurs a contraction of the vessels in the neighborhood of the swelling, a diminution of the afflux of arterial blood, an acceleration of the efflux of the venous blood and the lymph; but the actual blood extravasation is not mechanically forced again into the blood-current; for by the employment of ice the veins and lymph-vessels in the neighboring parts which are not involved are contracted, and exert a pressure upon their own inclosed column of blood and lymph, which does not permit the absorption of the extravasated bood, unless the application of ice is discontinued. While it does not altogether prevent absorption, only a very small quantity of fluid can circulate through the contracted vessels. The extravasation is only slowly removed by the application of ice, it remains, therefore, in the same place, and sometimes induces the formation of fibrin tumors, cysts, and swellings of cell-tissue.

At the same time, the ice contracts the arteries, and also presses the extravasation of blood upon the capillary vessels, so that in severe cases of contusion, gangrene is caused, and demarcation and suppuration take place in the gangrenous tissue, unfavorable results which sometimes follow when the contusions are treated with the application of ice, notwithstanding the integument may be intact. On the contrary, by massage, as we have before seen, the entire circulation is stimulated, and tissue-change is promoted, so that such disturbances in the healing process are not possible.

In regard to the compressive bandage which is so much used in contusions and distortions, in recent cases it causes an increase of the pain and may even favor the development of gangrene. But, if it is applied in a later period, it exercises ordinarily only a moderate pressure upon the diseased part, so that resorption takes place but slowly. Besides, its long-continued use causes an atrophy of the muscles, and the part of the body involved, by being condemned to rest, becomes weak and debilitated. By massage, however, the pressure is not constant, but only momentary. The exudate is broken up, soon changes into a fluid, and is quickly absorbed, especially if active and passive movements are constantly exercised. The compressive bandage should only be applied temporarily; for example, during the time of the removal of the injured person and the ice only when the injured portion can not be treated by the manipulations of massage. Still less than ice and firm bandage are fomentations of a lotion of lead, mercurial and iodine ointments, the so-called resolvent liniments, derivant and absorptive means, equal to the efficacy of massage. In any case the so-called Priessnitz hydropathic cure should be combined with massage, being applied in the intervals of the manipulations and be changed from every quarter to half hour. Such are the *general indications* for the employment of massage. It is *contraindicated* in all suppurative diseases, also in malignant neoplasms, and finally in those diseases in which the formation of thrombi may be suspected. Massage may be followed by dangerous results by favoring the spread of infectious materials, the origin of embolisms and metastases, if it be employed without care and by unskilled persons.

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[1] D. Graham in the Medical Record, 1879, vol. xvi., No. 2, p. 174.

Especially may massage be used in the following diseases with good results:

1. Contusions and sprains of the soft parts and the bones without breach of continuity.

2. Diseases of the joints of all kinds, both periarticular and intracapsular, bloody or serous exudations and extravasations, false ankylosis, white swelling, rheumatism of joints, gout, especially also the so-called neuroses of the joints.

3. Rheumatic affections of the muscles, tendons, and fasciæ, as well as hyperæsthesiæ and slight circulatory disturbances in the muscles.

4. Connective-tissue indurations, cicatrices, contractures, scleroses, inflammations of the sheaths of the tendons.

5. Paralysis following spinal diseases and after wounds, infantile paralysis, chorea minor, sciatica, commencing tabes, neuralgias, and writer's cramp.

6. Dyspepsia, chronic constipation, and hemorrhoids.

7. Chronic inflammations of the uterus and ovaries.

8. Catarrhal inflammations of the larynx and pharynx, both acute and chronic.

Recently massage has been tried with success by ophthalmologists. It has been used with good results by Pagenstecher in episcleritis and parenchymatous keratitis, and by D. Graham (*Boston*) in muscular asthenopia.[1]

In œdema from heart and kidney diseases, temporarily good results have been observed. In two cases of elephantiasis arabum, a six weeks' employment of massage effected an improvement. The combination of massage with gymnastics, consisting of active, passive, and double active movements, with the overcoming of resistance is very convenient. Further, during treatment patients must be allowed all possible use of their limbs. This is pleasanter to them than forced rest, and improves their general condition through restoration of tissue-changes. The latter is further favored, and the effect of the massage increased, through warm and hot baths with blankets, producing a profuse perspiration, and afterwards followed by a cold douche.

In the Russian and Turkish baths, the attendants are accustomed to knead and rub the whole body and make flexions and extensions of the limbs. Although these procedures produce an agreeable sensation, and in general may be of use, by exciting the activity of the muscles, and at the same time promoting tissue-changes, yet in diseased conditions less may be expected from these manipulations if they are exercised without direction. Especially, these masseurs are accustomed to rub along the periphery, which prevents instead of favoring the resorption of the pathological products. Besides, a steam-bath cannot be taken before every massage manipulation, which should generally be made once or twice a day.

On the contrary, massage exercised according to scientific principles has been followed by very surprising results, a few of which I will quote from recent German medical literature. These are communicated as especially remarkable by Eulenburg, the very distinguished director of a long-established gymnastic and orthopædic institution.

1. A lieutenant, M., had sustained, as a result of a fall from his horse during the French war, a luxation of the right shoulder-joint, with consecutive ankylosis (apparently true). After two years' use of the ordinary means, also treatment by baths in Wiesbaden, he came to Eulenburg for treatment, and was so perfectly restored by massage, with consecutive passive movements, that he was able to discharge his military duties without any inconvenience.

2. Lieutenant von D. received a fracture of both bones of the right leg in the neighborhood of the tibio-tarsal articulation. After union of the fracture, with considerable abnormal callous formation, there remained an ankylosis (apparently true), as a result of which the patient had to quit the service. By the use of massage, accompanied with passive movements, he was restored to a perfect capacity for service.

3. A Swiss confectioner was on the point of quitting his business on account of a white swelling of the right knee. After trying all ordinary means of treatment without success, he was completely cured by massage in the short period of four weeks.

4. Mrs. H. suffered for a year from hydrarthrosis, resulting from a rheumatic affection. After useless employment of all known means, a cure was effected by massage in the comparatively short time of six weeks.

918 North Eleventh Street.

HOSPITAL NOTES.

VIENNA GENERAL HOSPITAL.

Service of Prof. Carl Braun.

LABOR COMPLICATED BY CARCINOMATOUS STENOSIS OF THE CERVIX UTERI; HIGH AMPUTATION OF THE CERVIX, AFTER VERSION BY BRAXTON HICK'S METHOD, AND EXTRACTION OF THE FŒTUS.

(Specially reported for The Medical News.)

The case about to be reported deserves especial attention, as illustrative of a doctrine, growing in favor among modern German obstetricians.

The patient, thirty years old, unmarried, native of Austria, pluripara, in her seventh pregnancy, was admitted into the lying-in-ward of Prof. Carl Braun, at 7 P.M., 4th March, 1883.

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[1] Medical Record, vol. 16, No. 8, p. 172.

The history of the case, as gathered from the woman's incoherent ramblings, was, that the bag of waters had ruptured four days previous to her arrival in the hospital, and that, since that time, she had felt pain at irregular intervals. Subsequent examination rendered her statements doubtful.

Abdominal palpation revealed a small-sized fœtus, presenting by the vertex. Fœtal heart-sounds were loud, regular, and frequent. By vaginal exploration, it was discovered that both lips of the os uteri were invaded by a neoplasm of globular form. The tumor in each lip was as large as a small-sized chicken's egg. The diseased tissue extended some distance into the cervical canal—two centimetres upon the right side, still higher up upon the left side—constituting a stenosis, which was passable for two fingers. Through the stenosis, the head, covered by the bag of membranes, could be felt.

The general appearance of the woman did not evince any degree of the so-called cancerous cachexia. At the time of admission into the lying-in-ward, the uterus was contracting with force, and pains, of an unusually severe character, were felt.

Prof. Carl Braun was immediately summoned by the clinical assistants, Drs. Felsenreich and Pritzl, in consultation.

Cæsarean section was suggested, but was rejected for the reasons: 1. That the fœtus was immature, although viable, and its chance for life slight. 2. Such an operative procedure would afford the mother the minimal benefit.

Hysterostomatomy, that is, deep incisions into the cervix, right and left, followed by podalic version and extraction of the fœtus, was regarded as impracticable. Prof. Braun proposed, as a last resort, that turning be effected after the method of Braxton Hicks, and that the child be extracted immediately after that operation.

Under Prof. Braun's supervision, Dr. Felsenreich succeeded, by external and internal manipulation, in turning the child. The extraction was effected with some difficulty, after the woman had been thoroughly anæsthetized. The placenta was expelled, after Credè's method, with ease. The parturition was immediately followed by an alarming hemorrhage. It was found, upon vaginal exploration, that the cervix was lacerated upon the right side to the extent of five cm., the rent extending into the parametrium. Both broad ligaments were at once transfixed and ligated with double ligatures. The lower third of the collum uteri was excised, after the arrest of hemorrhage, and the lips of the amputated portions carefully approximated with Hegar's suture. All hemorrhage had by this time ceased, and there remained two holes in the upper portion of the vagina, passable for the half-hand, one leading into the uterine, the other into the peritoneal cavity.

During the operation the patient was placed in Sims' position; the anæsthetic employed was the English mixture of chloroform, absolute alcohol, and sulphuric ether. The operation as thus performed, constituted a high amputation of the cervix uteri, completely removing the carcinomatous mass, after turning and extraction of the fœtus. The child, male, weight 2070 grammes, length 47 centimetres, was immature and was born apparently dead. It was speedily revived by the employment of Gustav Braun's balloon catheter, and is now in a thriving condition in the Foundling Hospital.

The mother experienced little shock from the operation, and, at the time of writing—ten day's after the operation—is in a promising condition. Her temperature during this period has not reached 39.5° C. Pulse and respiration have been nearly normal. Copious irrigation of the cervical portion with 2½ per cent. solution of carbolic acid in the half-sitting posture, was instituted upon the second day after the operation, and is continued at present. The vaginal discharge is considerable in quantity and has a slightly offensive odor.

MEDICAL PROGRESS.

Geographical Distribution of Phthisis in the Eleven Northern Counties of Scotland.—At the late meeting of the Sanitary Institute of Great Britain, Dr. Simpson, the medical officer of health of Aberdeen, read a paper on this subject, in which he summed up as follows: 1. That phthisis has decreased in the North of Scotland during the last eleven years. 2. That phthisis is more prevalent on the north-west coast of Scotland than on the north-east. 3. That the east wind is not productive of phthisis. 4. That the elevated portions of the country do not stand out prominently, even although they are more thinly populated, as being freer from phthisis than the sea-coast on the east, or other low-lying situations. 5. That the Hebrides are not free from phthisis. 6. That local conditions, whether they be social or geological, or both combined, appear to have a greater influence on the prevalence or non-prevalence of phthisis than any general climatic agency. 7. If there is any climatic influence, the north-west wind, combined with excessive rainfall, proves injurious.—*Lancet*, September 29, 1883.

The Germ Theory and Disease.—At the meeting of the British Association for the Advancement of Science held on September 22, Dr. William B. Carpenter read a paper on this subject, which he treated from a natural history point of view. He pointed out the facility which the lower forms of life possess of adapting themselves to changed conditions of existence. He believed, although it has not yet been proved, that the same germs under different conditions give rise to various diseases; and these opinions he supported by various arguments. The decrease of the virulence of the smallpox which ravaged Europe in the fifteenth century, he attributed to the cultivation of the mildest cases which occurred, while a severe dose of any particular disease germ may so affect the system that a disease arises which cannot be recognized as related to that from which it proceeded. Under favorable conditions an ordinary intermittent fever (endemic) may develop into a virulent form, which is highly contagious. There was, in the opinion of the author, very strong ground for the belief that even the innocent hay-bacillus, which, when sown in broth or milk, simply causes its putrescence, and has no power of developing itself, in the human body may undergo such an alteration in its type as to become the germ of severe disease.

Notwithstanding, therefore, the tendency among modern pathologists to regard the various forms of zymotic disease as specifically distinct, and to attribute to inexact observation every recorded fact which ran counter to their preconceptions, the author held that the application of the natural history method to the study of these diseases fully justified the belief that the same germs undergoing development under different conditions might manifest themselves under a variety of forms, and maintained that a larger study of the history of medicine justified the belief that while some of these germs, breeding only in the human body, had acquired a considerable fixity, yet that this fixity did not necessarily hold good over the whole world or through all time; and that there was a large class, including cholera and the various forms of fever originating in germs which breed in the soil as well as in the human body, over which the nature of the breeding-ground, with various atmospheric (possibly electrical) conditions, exerted a most important modifying influence. He held that this inclusive study, taking account of all the facts which science could bring to bear on the inquiry, was much more likely to lead to accurate results than the exclusive method followed by many pathologists.

RELATION BETWEEN THE FLUID ABSORBED AND THE URINE EXCRETED IN SCARLATINA.—According to PROF. GLAX (*Archiv für exp. Path. u. Phar.*, xxxiii. 200), there are three distinct forms of relation between the fluid absorbed and the urine excreted in scarlet fever. The quantity of urine is diminished only while the fever lasts, it then gradually rises to the normal or exceeds it for several days. In this form the course is very favorable, notwithstanding the high temperature at commencement. Secondly, the diuresis increases immediately after the cessation of the fever, but in the next few days sinks greatly, and during the whole course exhibits enormous variations. This course is not favorable when the patients become anæmic; œdema may occur, but the urine remains free from albumen. In the third form, the excretion of urine, which was diminished during the fever, during defervescence rises quickly to the normal or over it, and remains so for several days as in the first form. It then sinks rapidly and remains low until death; or after several days a copious flow of urine takes place, which sinks gradually to the normal. To this class all cases belong in which, after an apparently normal course at first, nephritis and dropsy occur. In these cases a diminution of the urine is frequently the first sign of subsequent complications before any albumen has appeared in the urine, or before any trace of œdema is observable. This is of considerable practical importance, as a careful observation of the body-weight and quantity of urine shows that increase in the weight of the body and coincident decrease in the quantity of urine indicate the approach of complications. These may be averted or greatly diminished by restricting the quantity of fluid absorbed, for generally it is observed that the diuresis increases as soon as the quantity of fluid ingested is reduced. The reason for this appears to be that the weakened heart is unable to cope with any large quantity of blood, and the rapidity of circulation necessary for the secretion of urine is not attained. The author considers also that the convulsions in scarlet fever are chiefly due to œdema of the brain.—*Practitioner*, October, 1883.

SUGAR AS A DRESSING FOR WOUNDS.—DR. F. FISCHER says that in the Strasbourg Hospital, where he is assistant in the surgical department, Professor Lücke has since May used powdered cane-sugar as an antiseptic dressing to wounds. Hitherto, it has been used in combination with naphthalin (equal parts) or with iodoform (1 part to 5 of sugar). In cases of wounds united by suture, the mixture is put up in gauze and applied to the part; where there is loss of skin, the sugar is sprinkled directly over the part. The sugar-dressing is fixed in place by some layers of gauze deprived of fat, over which a layer of gutta-percha is applied, and the whole is secured by a bandage. The sugar-dressing may remain from eight to fourteen days, without the sugar dissolving; the secretion from the wound is equally distributed through the sugar, and it is only when the layer of sugar is too thick (more than about one-fifth of an inch) that lumps are formed. The wounds have a healthy appearance under the sugar, the dressings are not offensive, and bacteria cannot be found in them. Healthy granulations, with no tendency to bleed, are developed; and cicatrization proceeds rapidly. In wounds united by suture, healing by the first intention has always been observed. Dr. Fischer is not able to say whether the sugar is decomposed, or what new products are formed. Writing in the *Allgemeine Medicinische Central-Zeitung* in reference to Dr. Fischer's communication, Dr. Windelschmidt, of Cologne, says that he has used sugar alone as a dressing with good results. He finds that for small wounds and ulcers powdered cane-sugar is not inferior to iodoform as a dressing, while iodoform is necessary in many cases, such as chancres and mammary abscesses. He calls attention to the fact that powdered sugar is a very old popular remedy in cases of fungous granulations, ichorous eczema, and erysipelas of the face. Whether the action of sugar is antiseptic, is not certain; that it is aseptic, is proved by its use in confectionery. In spite of his success, Dr. Windelschmidt has for several months desisted from the use of sugar as a dressing; partly because the patients found out the nature of the powder that was applied and ceased to trust in it, partly because they treated themselves, and so passed from his observation. He thinks, however, that sugar, like iodoform and naphthalin, has its sphere of application; and joins with Dr. Fischer in recommending that it be more extensively tried.—*British Medical Journal*, October 13, 1883.

SALICYLATE TREATMENT OF RHEUMATISM.—DR. ISAMBARD OWEN, in an elaborate statistical inquiry (*The Treatment of Acute Rheumatism*, 1883) into the results obtained in St. George's Hospital in 1877 and 1878 by the use of salicylates in rheumatism, arrives at the following results:

1. The duration of pain and fever after the beginning of treatment would appear to be independent both of the character of the cases (so far as defined by the range of temperature) and of their previous duration.

2. The duration of the primary attack does not appear to be affected by the amount of the initial doses of salicylate (within the limits given, viz., one and a half to three drachms in the twenty-four hours), or by the combination of full doses of alkali with the drug.

3. The duration of the primary attack after the commencement of treatment was only about half as long as under full doses of alkali.

4. In administering the salicylates, an advantage is gained in shortening the total duration of the case (*i. e.*, until convalescence is established) by restricting the initial doses and by combining with them full doses of alkali.

5. In respect of actual suffering, salicylate treatment showed a marked advantage when compared with alkaline treatment; the advantage was least marked where the salicylate was given in large initial doses without alkali, and hardly more so where the salicylate was given only in small doses; the advantage was more marked for the salicylate in moderate initial doses, and most marked of all where the salicylate was given either in large or moderate initial doses combined with full doses of alkali. In the two latter cases the total duration of suffering averaged hardly more than half that shown in the cases treated by alkali alone.

6. Summing up, the greatest aggregate of advantage is derived from a combination of salicylate and alkaline treatment, the salicylate (of sodium) being given in doses equivalent at the outset to two drachms in the twenty-four hours, and reduced as occasion requires. The alkaline treatment referred to consisted in the administration of doses of potassæ bicarbonas, or potassæ citras, of sufficient amount to render the urine alkaline. The salicylate was that prepared from carbolic acid. —*Practitioner*, October, 1883.

Resorcin.—Dr. F. Righi, of Lignago, gives the following summary at the conclusion of a paper on the action of resorcin:

1. Resorcin is well tolerated by the human system. Given in frequent or large doses it causes vertiginous sensations, roaring in the ears, redness of the face, and sometimes a sensation of heat in the stomach, with profuse perspiration in about two hours, and coloration of the urine.
2. In miasmatic affections it is a secure remedy against the febrile attack, and destroys the malarial infection.
3. It is efficacious in reducing recent enlargements of the spleen, but has no effect in chronic enlargements.
4. In typhoid fever, pneumonia, and erysipelas it is a prompt antipyretic, but has no influence on the pyrogenic element.
5. In acute gastro-intestinal catarrh it is of surprisingly rapid and certain effect when combined with bicarbonate of soda.
6. In chronic blenorrhagic urethritis it is to be preferred, for local use, over other more irritating remedies, and quickly restores the epithelium to the mucous membrane.
7. In conjunctival catarrh, whether acute or chronic, and in circumscribed affections of the cornea, it is very beneficial, and Masini recommends it as an efficient collyrium.—*Annali Univ. di Med. e Chirurg.*, July, 1883.

Resorcin may be used as a caustic in the crystallized form or in saturated solution. For vaginal or rectal injection it may be used in the simple form of grs. xv–xxx in f℥iijss of distilled water; for local applications, washes, sprays, inhalations, etc., resorcin grs. xv to f℥iijss of distilled water; for hypodermatic injection, resorcin ℈iv–ʒv to f℥iijss of distilled water. A good form for external medication is resorcin ℈iv–ʒijss to ℥j of glycerine or vaseline; for internal use a good form is resorcin ʒss–j, aromatic water ℥iij, simple syrup f℥j. This may be given in doses of fʒj or fʒij every two hours, or it may be given in emulsion, or in milk. It should be remembered that, during the use of this drug, the urine will be colored green, or brown, or black.—*Gazetta degli Ospitali*, No. 75, 1883.

Paraldehyde—an Antagonist to Strychnia.—Prof. Vincenzo Cervello has made two series of experiments with paraldehyde, the first being on the physiological action of this drug, and the second as to its antagonistic action to strychnia.

Regarding the first point, experiments made on frogs, rabbits, and dogs go to show that paraldehyde has a narcotic action, producing a calm sleep not preceded by excitement or agitation, the respiration becoming calm, and the number of respiratory movements slightly diminished. With very large doses death took place by cessation of respiration, without convulsions or vomiting. The drug seems to be very rapidly absorbed; five minutes after it was given to a dog, by the stomach, its effects were produced. As regards reflex sensibility, it only produced annulment of reflex movements when full doses were given. Though its action is somewhat similar to that of chloral, the diminution of the number of cardiac contractions is not so marked as in the case of chloral, nor are the respiratory phenomena analogous. The drug is easily absorbed when injected subcutaneously or into the rectum. The after-effects are not unpleasant. Cervello recommends that it be given in a 3 to 100 solution of sweetened water or syrup, which has no disagreeable taste, and does not produce the characteristic burning sensation in the mouth.

Antagonistic action to strychnia.—In the second series of experiments three different methods were employed: 1. A non-fatal dose of paraldehyde was given, and then a dose of strychnia; 2. Fatal doses of strychnia were given, and then doses of paraldehyde; 3. The two were given simultaneously. To further assure himself, also, the experimenter gave one or the other of the drugs to the animal after the three methods had been tried. He found that paraldehyde completely antagonized enormous doses of strychnia, but that the administration of the latter did not interfere with the narcotic or other effects of the former, on the other hand, it only seemed to prolong the narcosis produced by paraldehyde.—*Bull. Gén. de Thérap.*, August 30, 1883.

Antimony in certain Skin Diseases.—In a paper read on this subject at the late meeting of the British Medical Association, Mr. Malcolm Morris advocates the use of antimony, in the form of tartar emetic, in doses of gr. $\frac{1}{240}$ to $\frac{1}{32}$, in certain skin diseases.

Eczema.—In the majority of the cases which have come under his care, its beneficial effect has been both marked and rapid. In the acute general eczema of adults, which usually commences somewhat suddenly by heat and burning on the flexor surfaces, and on other characteristic positions, and is soon followed by abundant exudation of clear fluid, and in the form known as eczema rubrum, he generally begins with four or five minims of the vinum antimoniale three times a day, increasing the dose gradually up to seven minims. After a few doses, the exudation ceases, and the local irritation is much relieved; but, in order to prevent a relapse, it is necessary to continue the treatment until all traces of the eruption have disappeared. In acute eczema of children, the dose should be in proportion to the age of the child—half a minim or less up to six months, and one minim or less up to a year. As a rule, he has found that both children and adults bear these quantities well, neither sickness nor diarrhœa being produced. In the case of aged persons, however, the dose should not exceed three or four minims to begin with, as diarrhœa may result from the administration of a greater amount.

In the subacute forms, both of children and adults, similar doses, but continued for a longer period, are necessary. In chronic eczema, especially when localized, the use of antimony is less often successful; but even in this troublesome form, it relieves the acute exacerbations, and is occasionally followed by cure when other methods of treatment have failed.

In eczema impetiginosum of children, he has noticed little benefit from the drug till the scabs have been removed, and formation of pus checked by local treatment. Simple impetigo contagiosa from a local cause is not included in this category.

In the various forms of so-called lichen that occur in children, he has found antimony in the previously mentioned doses of the greatest value in relieving the irritation—a feature in which it resembles arsenic.

Erythema.—The chief feature of this disease is that it is almost certain to relapse. By some authorities this is considered to be idiopathic erysipelas—the public always calls it so; by others, it is looked upon as a peculiar form of eczema, and said to be associated with gout. He has seen several cases, and is inclined to think it may be called relapsing erythema, as it has none of the dangerous qualities of genuine erysipelas. Antimony acts in this disease as in acute eczema, by shortening the attack and diminishing the severity of the symptoms. It should be continued for a considerable time after recovery, to prevent, if possible, a relapse.

Prurigo.—Three or four minims of the vinum, continued over a long period, allay the itching to a large extent, and often prevent the relapses of eczema. In several cases, after arsenic, iron, iodide of iron, cod-liver oil, and numberless other tonics had been tried, antimony was the only drug that produced any benefit whatever. When given in the before-mentioned doses continuously for more than a year, he has never seen sickness, diarrhœa, sweating, or debility; but, on the contrary, the appetite improves and the weight increases. He has not had the opportunity of trying the remedy in a patient older than eighteen and a half years suffering from this disease; but in one particular case of that age, the benefit was most marked while the drug was being taken.

Sycosis.—He has given antimony in five well-marked cases of this disease; in four, it did not seem to produce any effect, either beneficial or otherwise; in the fifth, there was considerable improvement after the vinum had been taken a fortnight in seven-minim doses. It seemed to relieve the pain and burning; but, although the remedy was persevered with for over three months, the improvement was only temporary. The local treatment while the drug was being administered was olive oil or vaseline. In none of these cases was there any bad effect; no depression, diarrhœa, sickness, or sweating.

Urticaria.—In a few cases of chronic urticaria, he has found antimony, like arsenic, of service in checking attacks, so long as the remedy was continued.

Psoriasis.—Though, in the majority of cases of psoriasis, arsenic is to be preferred to antimony, he has elsewhere called attention to the fact that, in certain persons, arsenic not only fails to relieve, but even aggravates the disease. He has, in some of these cases, tried antimony, and has noticed in a few instances that improvement took place, while in others it seemed to have no effect.

The author wishes especially to lay stress on two points: first, that tartar emetic—in doses of $\frac{1}{240}$ to $\frac{1}{32}$ of a grain, according to age—can not only be tolerated, but seems to have a decided tonic action; secondly, that it proves useful in those acute forms of skin disease that are usually aggravated by arsenic.—*British Medical Journal*, September 22, 1883.

KIDNEY IN THE CANAL OF NUCK.—DR. J. D. HUBBARD reports the case of a woman, æt. 36, of previous good health, no fatiguing work, who took a dose of patent pills on Tuesday, July 24, 1883. The pills operated by the next day with considerable violence, causing intense pain and distressing straining. That afternoon she noticed a slight enlargement in the right groin; but, giving her no pain, she thought it was an enlarged gland, and paid no further attention to it, but retired as usual Wednesday night. On arising on Thursday, she discovered the labium majus of the right side greatly enlarged, yet it gave her no pain of consequence; the pain she did have was vague, and mostly referable to the spinal column; intense itching prevailed and caused her to rub the parts, until she found that rubbing did no good; this itching was a most annoying symptom. She then passed water and noticed that it was quite red; her appetite had entirely disappeared, she could not eat anything, not that she could not retain it on the stomach, but for want of inclination. She did not crave water, nor did she pass more or less than usual, though it continued red; bowels moved Thursday, passage looking normal.

The reporter saw the patient on July 28th for the first time. On examining the tumor, he found it to be about four inches long, and about two inches wide; the thickness could not be made out, as the patient was quite fleshy. It occurred to him that it might be a kidney.

On Monday, July 30th, the patient was anæsthetized, taxis applied, and, after a somewhat prolonged manipulation, he succeeded in getting the kidney started in the proper channel, when it went into the abdomen with a decided jump, not stopping until it reached the region of the umbilicus. It made a distinct wave as it passed up. Here he grasped the tumor and examined it. Two other physicians also examined it there, and pronounced it the kidney. It still floats in the abdomen. He has examined it several times since.

Further examination into the history of the case indicates that she has probably had a floating kidney for a year or two.

The next day after the reduction of the hernia, she found that her appetite had returned; she ate very heartily in the morning, also noon and night. She is recovering rapidly, and already going around. She wears a truss, of course.

How did the kidney pass through the canal when the patient was in the prone position and asleep? Certainly no very great pressure could have been exerted from behind. The following is offered as a hypothesis:

It has been already stated that Wednesday evening she noticed a small swelling; now this portion of the kidney had already passed a point of constriction; the arteries being somewhat resistant to pressure, allowed blood to pass into this little protruding mass, while the veins being more susceptible to pressure, prevented the ready return of the blood, and, in consequence thereof, hyperæmia supervened, resulting in œdema or extravasation and swelling: as the little mass grew larger, it either pressed the constriction over a little more kidney, or pulled more kidney through, which in turn filled up and drew down more, and so on, until the entire organ had passed, when, of course, the circulation was reëstablished, the œdema absorbed, and the kidney reduced to its original size.—*St. Louis Courier of Medicine*, October, 1883.

NEW METHOD OF SEWER VENTILATION.—The description and drawings of an ingenious contrivance for ventilating sewers and purifying sewer air have been forwarded to us. The idea seems so good that we regret we have not been able to see it practically applied, though it is stated that successful experiments have been made at Manchester. The apparatus is patented by Mr. T. S. Wilson, F. S. I., and Mr. H. T. Johnson, and is called the Patent Hygienic Furnace. Profiting by the proximity of the gas mains to the sewers, the patentees have constructed a gas furnace to be inserted in the man-holes. The gas is introduced into a little chamber, where it is mixed with a due proportion of air and supplies some Bunsen burners. Immediately above the gas there are some fireclay plates, which soon become heated; while above them are iron divisions. The heat naturally draws the air up from the sewer below; it passes through the Bunsen burners backwards and forwards over the fireclay plates and iron divisions, till at last it finds its exit in the ventilation chamber or man-hole, and hence through the grate into the street. The furnace not only causes a strong current of air from the sewer, but, as it is capable of being heated at from 600° to 700° Fahr., it should destroy all the germ life that travels with the sewer gas. Experiments with sterilized infusions of meat have been made, and whereas ordinary air drawn from the street soon caused the infusions to become turbid with animalcula and fungoid life, no such effect was produced by the sewer air taken after it had passed through this furnace. There is, however, one objection to furnaces when employed to ventilate sewers. They certainly produce a very active suction, but the effect, however energetic, only extends to a short distance. We would therefore suggest, that these ventilating furnaces should be as small and as inexpensive as possible, so that a large number of them might be used, and these at very short intervals.—*Lancet*, September 29, 1883.

THE MEDICAL NEWS.

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SATURDAY, OCTOBER 27, 1883.

CLINICAL RESULTS OF NERVE-STRETCHING.

In the *Annali Universali di Medicina e Chirurgia*, for March, 1883, will be found an elaborate paper on elongation of the nerves, with a statistical table of 512 cases, from the pen of DR. VINCENZO OMBONI, of Cremona, from which it appears that, of the entire number, 185 were cured, 229 were ameliorated, and 98 were not benefited, the latter including 48 deaths from the affection for which the measure was resorted to, and 12 deaths in consequence of the operation. As the contribution is the most complete of which we have any knowledge, embracing, as it does, over one hundred cases more than were collated by DR. W. J. CHANDLER, in the *Medical Record*, vol. xxii. 1882, we think that we will do our readers a real service by presenting them with an analysis of its contents.

The operation was practised for neuralgia 222 times, with 143 cures, 62 ameliorations, 16 failures, and 1 death, as its direct result. Of the entire number, 62 were examples of neuralgia of the trigeminal and optic nerves, of which 31 were cured, 24 benefited, and 7 failed. 6 cases of neuralgia of the spinal nerves, that is to say, 2 of the intercostals, 2 of the occipitals, 1 of the spermatic, and 1 of the genito-crural, afforded 4 cures, 1 temporary benefit, and 1 failure. Of 37 cases of neuralgia of the nerves of the upper extremity, 23 were cured, 13 were benefited, and 1 failed. Of 117 instances of neuralgia of the lower extremity, in which the sciatic, as a rule, was the nerve stretched, 85 were cured, 24 benefited, 7 failed, and 1 died of pyæmia.

Of 25 contractures with clonic spasms, 11 were cured, 13 benefited, and 1 failed. In 2 of these cases the spinal accessory was elongated, of which 1 was cured and 1 failed. Of the 13 contractures with tonic spasms, 8 were cured, 3 were benefited, and 2 failed. Of 3 contractures without convulsive movements, 2 were cured, and 1 failed. Of 41 cases of contractured muscles, therefore, 21 were cured, 16 benefited, and 4 failed.

For epilepsy, 7 cases show 2 cures, 4 benefits, and 1 failure. The successes were instances of reflex epilepsy. Of 51 operations for tetanus, the author states that 10 were cured and 42 died. The discrepancy appears to be due to the fact that he rates one case as a cure, which died subsequently of erysipelas, so that there were in reality 9 cures and 42 deaths, of which all but one were due to the onward progress of the disease. Eleven of the fatal cases showed a temporary improvement.

Of 40 cases of peripheral paralysis, 2 were cured, 36 benefited, and 2 failed. 6 of these were for motor paralysis, of which 2 were cured, 2 benefited, and 2 failed, the 34 examples of sensory paralysis having been merely ameliorated.

The nerve was stretched for various affections of the central nervous system 149 times, with 5 cures, 100 ameliorations, 27 failures, and 17 deaths, of which 10 were ascribable to the operation. For myelitis, 44 cases afford 1 cure, the success having been one of crural neuralgia following fracture of the vertebræ, 20 ameliorations, 18 failures, and 5 deaths. Of the 4 examples of paralysis agitans, 1 was cured, 1 was benefited, and 2 failed. 2 cases of athetosis gave 1 cure and 1 amelioration. The 99 cases of ataxia resulted in 2 cures, 78 benefits, 7 failures, and 12 deaths.

Finally, the sciatic nerve was stretched successfully once for chronic pemphigus, and once for senile pruritis.

From a careful study of the tables of Dr. Omboni, it appears that elongation of the nerves may be employed with very decided advantage in peripheral neuralgia and in spasmodic muscular contractures which have resisted the ordinary methods of treatment; and there is every reason to believe that it will supplant, in great measure, neurotomy and neurectomy in the former affection. In neuralgia of the cranial nerves, the procedure does not justify the adverse opinion of Nicaise, expressed in the *International Encyclopædia of Surgery*, vol. iii. p. 628, that stretching of the cranial nerves "should be done with reserve and prudence, in the fear of immediately fatal reflex effects, or of trophic disturbances," since none of these ill effects have followed the elongation of the trigeminal branches in fifty-three instances, and of the optic in nine cases. The question of benefit, in consequence of the comparatively few cases hitherto recorded, must remain an open one in epilepsy, peripheral motor paralysis, athetosis, paralysis agitans, senile pruritus, and pemphigus, although the 2 cures and 1 amelioration in the three examples of reflex epilepsy, and the 2 cures and 2 ameliorations in the 6 cases of peripheral motor paralysis, must be regarded as encouraging results. In peripheral sensory paralysis, as, for example, in anæsthetic leprosy, all the cases were benefited, but none cured. For tetanus, if employed early, it is not only justifiable, but worthy of extended trial. In chronic myelitis it holds out little encouragement. The worst results have been obtained in ataxia, and it should not be resorted to in this affection unless the pain is excessive, and there is a fair prospect of primary union of the wound.

As the sciatic is of all the nerves the one which is most frequently subjected to stretching, it is desirable that, in the future, the bloodless method of Trombetta, which consists in forced flexion of the thigh on the pelvis, while the leg is extended upon the thigh, shall be given a fair trial. Of the 117 cases of nerve-stretching for neuralgia of the lower extremity, the sciatic was elongated in the usual manner in 102, 1 proving fatal from pyæmia. Of 2 additional examples, from the practice of Medini, reported in the *Bullet. di Sc. Med.*, No. 3, 1883, 1 died of necrotic phlegmon of the thigh on the fourth day; and this death-rate of two per cent. doubtless represents the actual mortality of the procedure. Of course, it is a desideratum to avoid the dangers and inconveniences of a bloody operation if an efficient substitute can be found for it. Whether this substitute will be forced flexion remains to be seen, since the cases recorded up to the present time are too few upon which to base an opinion as to its therapeutic value. Adding to the 9 cases collated by Omboni the 2 recorded by Medini, the 11 afford 9 cures, 1 palliation, and 1 failure. Of the 104 cases of stretching the sciatic after preliminary incision, 71 were cured, 25 benefited, 6 failed, and 2 died; so that, with these data before us for comparison, the bloodless operation will be seen to yield a greater proportion of cures, while it has not proved fatal in a single instance.

While it has heretofore proved to be safe, the bloodless procedure is now and then attended with subcutaneous rupture of muscles, as indicated by an audible snap and extravasation of blood. In the case of Fiorani, reported in the *Annali Univ. di Med. e Chir.*, for February, 1883, the muscles on the back of the knee gave way, and in one recorded by Medini, the biceps, semimembranosus, and semitendinosus were torn; but in neither example were the ill effects permanent. Fiorani, moreover, points out that the quadratus femoris is contused by forced flexion, and he has even seen it divided in the cadaver by the tremendous pressure exerted upon it by the nerve in its passage across it.

THE ACTION OF BENZINE AND NITROBENZINE.

The free use of benzine in the arts, and the consequent dangers to health and life, render some notice of its action timely. Its physiological effects have been studied by Drs. Neumann and Pabst by experiments on animals, and by the analysis of the toxic symptoms as observed in man. There is a close resemblance in the effects of benzine and alcohol, ether and chloroform. The influence of this substance is exerted especially on the cerebrum. Its first effect is excitant, and this is followed by disorders of voluntary movement, of sensibility (anæsthesia), and of the mental faculties (hallucinations). Amongst the effects observed from its chronic action are antaphrodisia and black discoloration of the teeth and the margin of the gums. Benzine is eliminated almost entirely by the lungs, only a small part of that taken appearing in the urine as phenol and other products.

Nitrobenzine is more powerful. Its effects do not follow immediately, from a half hour to an hour, and sometimes a longer period, elapsing before symptoms are manifest when its vapor is inhaled. The face becomes livid, the integument especially of the face and extremities assumes a bluish hue, and an odor of bitter almonds is exhaled. Convulsions, cramps of certain muscular groups (trismus, opisthotonos) are amongst the nervous symptoms induced by it. Of forty-four recorded cases of its toxic action, fourteen proved fatal, and thirteen of these occurred after the stomachal administration—facts apparently demonstrating that the inhalation of the vapor is less dangerous. There appear to be no characteristic lesions, but in all cases fluidity of the blood has been noted, the red blood-globules are damaged, and hæmoglobin is transformed, to some extent, into hæmatin.

FEMALE PHYSICIANS IN INDIA.

"With regard to the fitness of women for medical practice, in this country opinions differ," says the London *Times*, "but in the case of India there need be no discussion about fitness, for the simple reason that there the question is not one between women and men, but between women and no doctors at all."

Any one familiar with the beneficent results following the labors of the female physicians sent out by the Zenana Missions, both in this country and England, will acknowledge the justice of the statements of the *Times*. The native women, especially those of high caste in the Zenanas, are absolutely shut out from skilled medical aid, since they cannot be attended by men, not even in any ordinary illness or accident, much less in confinements or any female diseases.

The only way to remedy this dreadful state of affairs is to provide for them physicians of their own sex, and this America and England are doing. And the results of the effort are far wider than would seem probable at the first glance. Not only are the physical ailments of the women treated skilfully—for the female physicians sent out are capable, and have been thoroughly trained—but the moral influence exerted towards the destruction of the "caste" system with all its evils, and especially towards the abolition of the systematic seclusion of women will be widespread and powerful, to say nothing of its strictly religious influence, which is at least no less beneficent.

It is not a little significant, that right upon the heels of such an editorial in the *Times*, comes the announcement of the fact that Mrs. Joshee, a young native Indian woman of *high caste*, has left her country and entered upon a course of medical study at the Woman's Medical College of Pennsylvania. From a religious and social point of view it is one of the startling facts of the nineteenth century, the significance of which can only be appreciated by those who are familiar with the rigid rules of the Indian mode of life. She is not a "Christian," but a "heathen" woman who has dared to take this step and yet preserve her "caste" intact, and she will go back to India to minister to her sisters in their sicknesses and accidents, as not even a foreigner, woman though she be, can do.

It is indeed the first step towards filling the need that the *Times* suggests, that not only foreign "Christian" women should be educated as physicians, but also the intelligent native women themselves. The number of the former class can hardly be increased to such an extent by the missionary societies as to afford the requisite relief to the millions of Indian women: the number of the latter can be increased indefinitely.

Queen Victoria has lent her powerful aid to the movement to provide medical aid to her female Indian subjects, by her gracious and conspicuous reception of Mrs. Scharlieb before her departure for Madras; and the sympathies and discreet aid of Mr. Rivers Thompson, the Lieutenant Governor of Bengal, are understood to be heartily in accord with the movement, which will thus feel the impulse of the highest official aid, both in India and in England.

RENAL CIRCULATION DURING FEVER.

Reasoning from the very frequent, if not constant, presence of albuminuria attending high grades of fever, it has generally been supposed that the kidney is at such times hyperæmic and enlarged. But if the observations of Dr. Walter Mendelson, published in *The American Journal of the Medical Sciences* for October, 1883, be correct, it will be necessary for us to modify materially our views upon this subject.

Dr. Mendelson's experiments were made in the Pathological Institute of the University of Leipzig, under the direction of Prof. Cohnheim. The animals experimented upon were dogs, the kidney being carefully drawn out, and placed in an ovoid box known as an oncometer or "bulk measurer." Within this box the kidney is surrounded by some liquid, as oil, which is displaced by any increase of volume which the organ undergoes. The vessels, nerves, and ureter are carefully guarded from injury as they pass out of an opening in the side of the box. A feverish state is induced in the animal by injecting into the blood fresh gastric juice, and its immobility is secured by destroying the optic thalamus of one side. The displaced oil communicates with a graphic instrument known as the oncograph, which produces a tracing on a revolving drum, whence it appears that *during fever a progressive diminution in the volume of the kidney occurs.*

That these changes in the volume of the kidney depend on the amount of blood contained in its bloodvessels is inferred from the fact that the kidney contains no contractile elements outside of the vessels.

Dr. Mendelson's experiments also went to show that this contraction, which is proportionate to the degree of the fever, is the result of a stimulus conveyed to the vessels from the central nervous system, and that this stimulus is the consequence of irritation of the central vaso-motor centres by the abnormally hot blood circulating through them during fever.

Two important phenomena of fever must receive a different interpretation if these views are correct. These are, the decrease in the amount of urine secreted by fever patients, and the albuminuria. The former has heretofore been ascribed to the increased loss of water through the skin and lungs, whereas, according to Mendelson's results, the primary condition is a diminished blood-pressure and a retarded current within the organ, which must be followed by a lessened secretion of urine. The albuminuria so constantly present in high fever is to be ascribed to the anæmia of the kidney, in consequence of which the glomerular epithelium is too insufficiently nourished with arterial blood to enable it to perform its function of retaining within the vessels the albumen of the blood-plasma.

We hope that these experiments may soon be repeated, for, if verified, other important deductions will follow, whence practical advantages may be expected.

THE INITIAL LESION OF SYPHILIS.

In a paper recently read before the British Medical Association, and published in the *British Medical Journal*, of September 22, 1883, Mr. Bernard, Surgeon to the Liverpool Lock Hospital, makes some interesting additions to our knowledge in regard to the situation, period of incubation, and the forms of induration of the primary syphilitic lesion, which should prove to be valuable to those who are especially concerned with these objects of inquiry.

The primary lesion was met with on the inner surface of the prepuce in 118 cases; in the furrow in 71; on the corona in 45; on the skin of the penis in 26; on the outer surface of the prepuce in 23; on the body of the glans in 21; on the frænum in 11; at the meatus in 10; on the free border of the prepuce in 4; and in the urethra in 1 case. It will thus be seen that the prepuce, including the frænum, was the most usual site of the lesion, the furrow behind the corona coming next in order, and that the corona was attacked oftener than the body of the glans.

The period of incubation in sixty-nine cases varied from one to fifty-six days, the average being a little under twenty days, which agrees pretty closely with the generally accepted average of the end of the third week. An interesting point in this connection is the preference given to the multiples of seven as the most usual dates of the outbreak, it having been met with forty-three times out of the sixty-nine. This fact was observed by Fournier in twenty out of forty-five inoculations, and by Lowndes in twenty-five out of forty-seven cases.

Mr. Bernard finds that the induration, in the male, is best marked when the sore is situated on the inner surface of the prepuce and the furrow, where it feels like a piece of cartilage. When the gland is affected, the sensation is rather that of a thickening than of hardness of the part. At the free border of the prepuce, the induration, although characteristic, is not so elastic as when the lesion is seated on its inner surface. Absence of induration is common when the skin covering the body of the penis is involved, but, when present, it feels like parchment. In the female it is best marked on the nymphæ. When seated on the greater labium the sensation is similar to that when the lesion occupies the glans penis. In the fourchette the induration is not characteristic.

THE NEW CODE IN NEW YORK.

In the controversy which has been agitating the profession in New York for nearly two years, many physicians have been led into the advocacy of the New Code by the specious cry of "liberty of action," others by the idea, which has been more ingeniously than ingenuously put forth, that by throwing down all barriers between medicine and "the pathies" we would win over the practitioners of the latter, and, in some mysterious but unexplained way, we would thus advance the cause of scientific medicine.

We have never been able to accept these views. In fact, we have earnestly believed that there is but one way of attaining the eternal truth of science, and that is by quietly, but steadfastly, pursuing it until we reach the goal of demonstration, and that it does not become the true student of medicine, nor the dignity of his profession, for him to impede its progress by stooping to fraternize with what he believes to be a false science, because of any temporary advantage which might possibly accrue to him from this act, which, in this case, must have for its chief result the misleading of suffering humanity.

It is, therefore, with extreme regret that we learn of the approval of the New Code, which has been expressed after mature consideration and careful canvass by the majority of the Academy of Medicine and of the County Society of New York. We are confident that all these gentlemen, imbued with the true scientific spirit, are ready to accept any fact which is demonstrated to be true, from whatever source it may come, yet they have given a formidable stab to rational medicine by declaring that the so-called medicine of unreasoning dogma, in which they do not believe, shall be recognized as its mate. Their action misleads the public, which naturally looks to educated physicians to protect them from medical charlatanry, and deals a heavy blow at the honesty of medical science, the consequences of which we shrink from considering.

COMPARATIVE ACTIONS OF CONINE AND CURARA.

The difficulty experienced in procuring a sufficient supply of curara, and the very great variability in the activity of the commercial specimens, render it very desirable to procure an efficient substitute. This has been found apparently in conine. Until a stable preparation of the lattter had been made available, however, there was little practical utility in the suggestion. The bromhydrate of conine is both stable and readily soluble, and can therefore be employed with ease and certainty. It may be useful to recall to our readers' attention the points of resemblance, as they have been set forth in a series of comparative observations by Schulz and Schroff.

The paralysis caused by curara and by conine is due to an action on the terminals of the motor nerves, and on the nerve-trunks, the muscular contractility remaining unaffected.

Like curara, conine produces slight muscular contractions, especially in the muscles of the face and extremities.

Like conine, curara has a more decided paralyzing action on the pneumogastric than on the motor nerves of the heart. Prevost and Kölliker have noted that the salivary, lachrymal, and urinary secretions are increased by conine, and Luchsinger has observed the same results from curara.

The resemblance of these agents is thus so complete, that there is little doubt conine may be substituted for curara in physiological investigations as in the treatment of morbid states.

SOCIETY PROCEEDINGS.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, October 18, 1883.

The President, Fordyce Barker, M.D., LL.D., in the Chair.

After the reading and approval of the minutes of the preceding meeting, and the reception of the report of the Chairman of the Library Committee, the Academy went into a Committee of the Whole, for the consideration of the proposed amendments to the

CONSTITUTION AND BY-LAWS,

Dr. Ellsworth Eliot taking the Chair.

Dr. Austin Flint, Jr., said that he had no remarks to make in regard to the amendments, except to say a word or two in explanation similar to the statements which he had made two weeks before. There seemed to him to be no reason for discussing the amendments either in the Academy or the Committee of the Whole, and he was unable to see why a scientific paper had not been presented at the last meeting. It would have been sufficient, simply to give notice that certain changes in the Constitution and By-laws were proposed, and that action would be taken on them at the following meeting; after which the regular scientific work of the Academy could have been proceeded with in the ordinary way. He humbly submitted that the remarks of the gentleman who proposed and seconded the adoption of the amendments had not been in order, for the reason that the latter were not before the Academy for adoption on that occasion, and could not be, according to the Constitution and By-laws. He was here to-night, he continued, as the spokesman of a number of members who believed that the welfare and usefulness of the Academy of Medicine could be best preserved by strict adherence to the National Code of Ethics, and who are uncompromisingly opposed to these amendments—one and all. The amendments, as was well known, had one great object, viz., the elimination from the Constitution and By-laws of everything relating to ethics. They would reduce the Academy to the level of the many smaller medical societies of the city; making it a purely scientific body, with nothing whatever to do with the general welfare of the profession as regards the ethical conduct of its members. Of course, the elimination from the By-laws of the by-law which adopts the Code of Ethics of the American Medical Association, necessitates a certain amount of change in the wording of the Constitution and By-laws in other particulars. That issue is perfectly distinct. Every gentleman here to night who is in favor of maintaining the Code of Ethics that has been adopted by this Academy, will vote against every one of these amendments. He did not believe that any eloquence was sufficient to convert those misguided members of the profession who believed in another Code of Ethics or who believed in making the Academy a no-code organization. If adopted, however, they would leave the Academy without any Code whatever, and this he considered even worse than to accept the new Code. There was one point to which Dr. Flint wished to call the attention of the Fellows of the Academy. Not only do these amendments abolish the Code of Ethics, but in the tinkering (he said he used the word with respect) that has been done to these By-laws, it became necessary to provide that the Council should not appoint delegates to certain bodies, for the simple reason that without a Code of Ethics they could not appoint, or were not entitled to appoint, delegates anywhere. Another point was in regard to a quorum of the Council, which was now constituted by nine members, but by the amendment would be reduced to five. The duties of the Council, he said, were multiform and of great importance, and the proposed amendment put it in the power of three members to adopt measures involving the greatest interests of the Academy, and to take the initiative in disposing of its funds, and in other matters of the greatest importance. He wanted to see the quorum of the Council kept as it was, and he was informed on the best authority that a quorum had hitherto never been lacking, except, perhaps, at some of the meetings in the middle of summer. In conclusion, he stated that at no time in the history of the Academy had any amendments to the Constitution or By-laws ever been adopted which had failed to secure the endorsement of the Council; and, furthermore, that at no time had the Council ever made any recommendation which was not adopted by the Academy. It was simply ridiculous to suppose that a three-quarters vote (which was required by the Constitution and By-laws) could be secured in favor of the adoption of the amendments.

Dr. Flint then moved that the Committee of the Whole should rise.

The motion was seconded and put, and the Chair decided that it was carried.

Dr. Roosa appealed from the decision of the Chair, but the latter was sustained.

Dr. Eliot, Chairman of the Committee of the Whole, made his report, and The President called for the reading of the resolutions adopted by the Committee of the Whole at the last meeting. (These resolutions recommended the adoption of the proposed amendments.)

Dr. Flint, Jr., claimed that this was not in order, and the President maintaining that it was, Dr. Flint appealed, when the Chair was sustained.

The resolutions were then read by Dr. W. M. Carpenter, Secretary of the Committee of the Whole.

Dr. Flint, Jr., moved that the report of the Committee of the Whole be laid on the table.

Dr. Roosa, with four others, called for the yeas and nays.

After some discussion as to whether the register in which the members had recorded their names on entering the hall, or the full roll of the Academy should be used for calling off the names, The President decided that the register was sufficient.

Dr. Flint, Jr., then appealed from the decision of the Chair, but the latter was sustained by a vote of 88 to 84. The yeas and nays having been taken, the motion to lay the report of the Committee of the Whole on the table was found to be lost, the vote standing 114 against to 96 in favor of the motion.

Dr. A. L. Loomis moved that, when the question of the adoption of the amendments was put, the vote should be taken by ballot.

Dr. Austin Flint, Sr., offered, as an amendment to Dr. Loomis' motion, that the question of the adoption of the amendments be indefinitely postponed; and Dr. Loomis not accepting this, the yeas and nays were called for on the amendment. The amendment was found to be lost by a vote of 117 opposed and 95 in favor of it.

On motion, the balloting on the adoption of the amendments was then proceeded with, the Chair having appointed Drs. H. D. Nicoll, Daniel Lewis, and Arthur M. Jacobus, the assistant secretary, tellers. The result showed 121 votes in favor of the adoption, and 92 opposed, and the Chair announced that the amendments were lost.

Dr. Barker now asked the indulgence of the Academy for a few minutes, and said that, in such a body, with its high aims in science, honor and duty demanded of the members that all should acquiesce submissively in the result which he had just announced with great pain and regret. The letter which he had prepared to the Fellows had expressed his views on the present unfortunate state of the Academy, and the importance of the amendments to its organic law which he had proposed. He had, however, failed to convince a sufficient number of the wisdom of the course suggested, and he must acquiesce in the verdict. No one could say that he had endeavored to secure the passage of the amendments by personal solicitation of the members, for he felt that such a matter should be left to the judgment and intelligence of a body of men, such as the Academy is composed of, unbiased by prejudice and free from passion. He begged most earnestly that all past controversies, so far as the Academy was concerned, would be forgotten. He was convinced that very many of these differences had arisen, not so much from differences in principles as from differences in detail. For himself, he could only say that in the future, as in the past, he would give his best effort—and he begged all present to give their best efforts—to keep up the high scientific position of the Academy, and to support and increase their beautiful library for which they were indebted to so many liberal benefactors.

Dr. Loomis then offered a resolution to rescind the resolutions proposed by Dr. Flint, Jr., and adopted at the last meeting of the Academy in the spring, which provided that the Committee on Admissions should propose for election to membership the name of no non-candidate who was not known to be in favor of the Code of Ethics of the American Medical Association as adopted in the By-laws of the Academy.

In moving this, he remarked that the Fellows were not here to decide the code question. The spirit of the meeting was above such a low plane as this, and they were here to decide the welfare of the Academy, whether it should sustain the high position which it had hitherto occupied, or sink into degeneracy and anarchy. The latter alternative was inevitable as long as these objectionable resolutions remained in force. These had been the firebrand which had disturbed the peace of the Academy, and as long as they stood unrescinded, the same unpleasant scenes which had of late been enacted in this hall would occur again and again.

Dr. Flint, Jr., claimed that Dr. Loomis' motion was out of order, for the reason that it involved nothing more or less than a reconsideration of the resolutions proposed by him, and adopted by the Academy; and at the meeting at which they were framed, a reconsideration had been moved and carried, and after this it was voted indefinitely to postpone the reconsideration.

The President having decided that the point of order was not well taken, on the ground that the rescinding of a resolution was of a different nature from its reconsideration.

Dr. Flint appealed from the decision of the Chair, but the appeal was not sustained.

Discussion of Dr. Loomis' resolution now being in order, Dr. D. B. St. John Roosa made some remarks, comparing the action of the State Medical Society, in regard to the Code of Ethics, with that of the Academy; but they were decided out of order by the Chair, as not bearing directly on the question.

Dr. C. R. Agnew then endeavored to prove that the resolutions of Dr. Flint were a violation of the Constitution. In the first place, the Constitution provided only two qualifications for membership, viz., that the candidate should be a graduate or licentiate in medicine, and that he should have resided in this city and county, or in either of the counties of this State adjoining for the term of three years; but these resolutions introduced a third qualification, viz., adherence to the Code of Ethics of the American Medical Association. In the next place, the resolutions were in reality in the nature of an amendment to the Constitution, and the latter provided that no part of it (the Constitution) should be altered, except at a stated meeting subsequent to one at which a proposition to that effect should have been made in writing, and then only by a vote of three-fourths of the resident Fellows present. Instead of giving the required two weeks' notice, however, action had been taken at once on the resolutions, the only notice being a secret circular which was addressed to those known to be in favor of such action. When the resolutions had been passed, a certain movement of conscience seemed to have troubled the leaders of the Old Code party, and they had then resorted to some parliamentary sharp practice in order to render the action taken as permanent as possible.

A motion to adjourn was made at the conclusion of Dr. Agnew's remarks, and lost, and Dr. Loomis' resolution was then put and carried; after which the Academy adjourned.

THE PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, October 17, 1883.

The President, William M. Welch, M.D., in the Chair.

Dr. James C. Wilson presented the following

NOTE ON HYDRARGYRUM FORMAMIDATUM:

Some accounts of this preparation have appeared in recent journals. Towards the close of last year, Prof. Liebreich proposed, in a meeting of the Berlin Medical Society, a new drug for the treatment of syphilis by the hypodermic method. Chemically, this drug belongs to the amide group. Liebreich was led to use it from the fact that the ordinary amides of the body, of which urea is the principal one, are eliminated in an undecomposed state. When, however, the amide is in combination with a metal, decomposition occurs, and the metal is reduced and deposited. Liebreich found, by actual experiment, that this statement is true of mercury. It is supposed that the formamidated mercury, after hypodermic injection, undergoes decomposition, and that the metal mercury is set free in the tissues. The preparation is soluble in water, of neutral reaction, does not coagulate albumen, is not precipitated by caustic soda, and the presence of mercury can be demonstrated by potassium sulphide. It produces its effects very surely and rapidly. Liebreich regards it as the best remedy known for the hypodermic treatment of syphilis by mercury, as it is but little liable to excite local troubles or salivation. Later (*Med. Times and Gazette*, July 7, 1883), we find that Prof. Zeissel, in Vienna, after trial of this remedy in fifteen cases of syphilis, was well satisfied with the results. In three of these cases salivation was produced. Some pain followed its injection, which was not, however, so severe as that following the hypodermic use of mercuric chloride. Twenty injections was the maximum number required to disperse the manifestations, even in severe cases.

Dr. Schacht, of Berlin (*New Remedies*, Sept. 1883), writes at follows:

"Formamide is a colorless liquid, boiling at about 195° C., which can be distilled without decomposition only in vacuo. It is prepared by acting upon formate of ethyl by ammonia. When pure it is neutral, but easily becomes acid

"If a *concentrated* solution of formamide be *boiled* with precipitated mercuric oxide, decomposition ensues, and metallic mercury is separated.

"On the other hand, if a *dilute* solution of formamide be *warmed* on the water-bath with precipitated mercuric oxide, a clear, colorless solution results, in which soda (hydrate of sodium) produces *no* precipitate. Sulphide of ammonium, however, precipitates the mercury as sulphide, both from the formamide of mercury and from mercuric chloride. Solution of albumen is precipitated by the latter salt, but *not* by the formamide.

"Formamide of mercury is prepared in the following manner: 10 to 13 grms. of freshly precipitated, completely washed, and still moist mercuric oxide are gently warmed with a little water in a porcelain capsule, with gradual addition of 10 grms. of formamide. As soon as solution has taken place, the resulting colorless liquid is filtered into a litre-flask, and the latter filled to the litre-mark with distilled water. Each cubic centimetre contains 0.01 grm. of mercury, which is the quantity representing *one* hypodermic dose. Formamide of mercury keeps well in brown-colored bottles, and should also be dispensed in these."

In a note from Vienna (MED. NEWS, October 13, 1883), it is stated that Prof. Neumann is now trying hydrargyrum formamidatum on a large scale as an anti-syphilitic. It is used hypodermically in doses of 1 cc. It acts with far greater efficacy upon the recent efflorescences than upon the later manifestations. Pain of great severity and active local inflammatory troubles have resulted in Neumann's cases.

The preparation which I exhibit, made by Merck, of Darmstadt, is a one per cent. aqueous solution, and the dose of it is from half to one ordinary hypodermic syringeful.

It has not been possible to obtain the drug in this city until the present time. I would be glad to place the specimen which is exhibited in the hands of any member of the Society who may desire to made a trial of it clinically.

NEW YORK COUNTY MEDICAL SOCIETY.

Seventy-eighth Annual Meeting, with Election of Officers and Censors, October 22, 1883.

THE PRESIDENT, DAVID WEBSTER, M.D., IN THE CHAIR.

IN consequence of the very large attendance expected, the meeting was held in the Hall of the Young Men's Christian Association, instead of the usual place, the lower lecture-room of the College of Physicians and Surgeons.

The minutes of the last meeting were read and approved, and the SECRETARY, DR. W. M. CARPENTER, then read the annual report of the Comitia Minora, the By-laws directing that, at the annual meeting, the Comitia should report such of its proceedings during the year as had not already been announced to the Society at large.

THE SECRETARY also read the names of

EIGHTY-ONE CANDIDATES FOR ADMISSION

to the Society who had presented satisfactory documents and testimonials, and whom the Comitia recommended for election.

It was moved and seconded that the recommendation of the Comitia be adopted and the new members duly elected.

DR. AUSTIN FLINT, JR., moved that the motion be laid on the table until after the election of officers. This was defeated, and the motion electing the new members was then put and carried.

Continuing with the report of the Comitia Minora, the Secretary announced that in accordance with the finding of the Committee on Ethics in the case of Dr. H. H. Kane, it recommended that the latter should be expelled from the Society, and the recommendation was then adopted by the unanimous vote of the Society.

DR. O. B. DOUGLAS, read the

ANNUAL REPORT OF THE TREASURER.

At the commencement of the last fiscal year the balance in the treasury was $243.93, and during the year he had received $956 from annual dues, $946 from the assessment authorized at the last annual meeting, $213 from initiation fees, and $55 from the sale of the *Transactions of the State Medical Society*, making in all the sum of $3660.

The principal items of expenditure had been: $1922.52 for legal fees, $502.61 for the Secretary's expenses, $359 90 for the expenses of the State Medical Society, and $200 paid to the Secretary and Treasurer for services rendered; and there was left in the treasury a balance of $235.43.

The report was pronounced correct by the Auditing Committee, consisting of Drs. H. P. Farnham and P. A. Morrow.

THE ANNUAL ELECTION OF OFFICERS

being now in order, the Chair appointed as tellers, Drs. H. G. Piffard, W. T. White, George F. Carey, E. F. Ward, and W. T. Alexander.

The name of Brevet-Lieutenant Colonel Bennett A. Clements, Surgeon, U. S. A., having been duly proposed for honorary membership, Dr. Carpenter moved that Dr. John Milhan, who had presented Dr. Clements' name, should cast an affirmative ballot for the Society, and the motion was unanimously carried.

DR. A. FLINT, JR., having secured the floor, remarked that, as the names of the unusually large number of eighty odd new members had just been announced, he would like to inquire whether these gentlemen were entitled to vote at this election.

THE CHAIR having replied in the affirmative, Dr. Flint moved that the names of those new members who had paid their initiation fees and annual dues, should be read by the Secretary, so as to save the trouble of challenging the new members at the time that they voted; but the motion failed to pass.

DR. OBENDORFER said that he rose to ask for information, and inquired if bribery were a sufficient ground for challenging a vote, for, if it was, he would give notice in advance that he would challenge the vote of every new member.

DR. PIFFARD claimed that the gentleman had used disorderly language, and that his words should be taken down by the Secretary; but Dr. Obendorfer, on rising to make an explanation, was declared out of order by the Chair. This ruling was received with much dissatisfaction throughout the hall, as there was a general desire to hear on what grounds such a charge was made; and Dr. Leo protested that the rights of free speech had been interfered with.

DR. FLINT stated that, in the history of the Society, such a large number of new members had never been known to qualify on the night of an election.

The balloting was then proceeded with, and while it was in progress the reports of the various standing committees were made.

DR. C. S. WARD, Chairman of the

COMMITTEE ON ETHICS,

reported that but three cases had come before the committee during the year. Of these, one had been disposed of by arbitration, and the other two had been referred to the Comitia Minora.

DR. A. E. M. PURDY, Chairman of the

COMMITTEE ON PRIZE ESSAYS,

reported that but one essay had been received by them, the subject of which was "Tubercles of the Breast." The report gave an analysis of the essay, and stated that in the opinion of the committee it was not of sufficient merit to entitle it to receive the prize of the Society.

The report of the

BOARD OF CENSORS

was read by its Secretary, Dr. H. B. Conrad. It stated that the board had actively carried on the work of causing compliance with the medical law of 1880, and, in addition, had accomplished a much more important work in securing the withdrawal of its charter from the irregular institution known as the United States Medical College. It had been clearly proven that the law of 1848, under the provisions of which it claimed its right to exist as a professional school, never contemplated the establishment of medical colleges at all; and the Society had successfully carried its case in two courts, as well as before the Governor of the State.

It was true that an unworthy Legislature had passed a bill granting the institution a charter, but this had been promptly vetoed by the Governor. Consequently, the place was now closed, and could no longer go on issuing diplomas. The history of this case had distinctly demonstrated that in the State of New York medical colleges did not come under the head of benevolent and charitable institutions. In conclusion, the Board recommended that the law should be amended in such a way as to provide that all those who presented diplomas from institutions out of the State should be required to pass a medical examination before being permitted to practice, instead of merely having their diplomas endorsed by a medical college, as was now the rule.

To the report of the Board of Censors was appended that of the legal counsel of the Society, Edward C. Ripley, Esq. It included the narration of prosecutions and legal opinions given in thirteen unfinished and twenty-two new cases. Most of the prosecutions were conducted in the Court of Special Sessions, and the report stated that in no class of criminal cases was so large a proportion of convictions secured as in those brought by the Censors of this Society. A disgraceful state of affairs was shown to exist in the New York Eclectic Medical College, which, during the year, had actually endorsed the diplomas or licenses of five men while they were under prosecution by the Society; which granted them the right to register at the county clerk's office, and thus become legal practitioners of medicine.

DR. S. O. VANDER POEL, Chairman of the

COMMITTEE ON HYGIENE,

begged leave to report progress, and stated that the full report of the Committee would be submitted at the adjourned annual meeting.

The following

AMENDMENTS TO THE BY-LAWS

which were recommended by the Comitia Minora as desirable for carrying on the practical work of the Society, were then unanimously adopted.

Article I., Chapter XII., shall be amended as follows: "When any physician or surgeon applies for admission into this Society, he or she shall place his or her medical diploma, with the blanks herewith appended, properly filled out and signed, in the hands of the Secretary, who shall lay them before the *Comitia Minora*, whose duty it shall be to examine the same, and, if it approve thereof, shall grant him or her a certificate of membership, subject to the approval of the Society.

Chapter XVII. shall read as follows: "No member of this Society shall assume any sectarian designation indicating that his practice is based on any special doctrine or dogma, or specified method of treatment."

Chaper XVII. shall become Chapter XVIII.

APPROPRIATION TO THE COMITIA MINORA.

The treasurer having stated that during the ensuing year the Society would require not less than $3000, and probably more than that amount, Dr. Sturgis moved that $3500 be appropriated for the Comitia Minora in carrying on the work of the Society during the year. Carried.

The Secretary stated that the Comitia Minora had recommended

AN ASSESSMENT OF TWO DOLLARS

from each member in addition to the annual dues of one dollar, as in the last three years, and moved that the recommendation be adopted. Carried.

The Secretary then read the following

COMMUNICATION FROM THE WESTCHESTER MEDICAL SOCIETY:

To the Secretary of the Medical
Society of the County of New York:

At the annual meeting of the Medical Society of the County of Westchester, in June last, the Board of Censors presented the following resolutions, which were adopted:

Resolved, That the Representatives of this county in the State Legislature, be requested to urge the passage of *an act to prohibit all medical colleges from granting diplomas*, and requiring all candidates for the degree of Doctor of Medicine to appear before a State Board of Medical Examiners, who shall recommend successful candidates to the Regents of the State University for a diploma.

Resolved, That the Secretary send a copy of this resolution to the members of the State Legislature from this county, and to every County Medical Society in the State, and urge them to take the same action.

We think this resolution expresses the universal sentiment of a profession crowded with those who have virtually bought their diplomas. Let us earnestly cooperate to obtain the desired legislation. Please inform me of the action of your Society.

N. F. CURTIS, Secretary.

On motion the communication was referred to the Comitia Minora.

SCARLET FEVER IN HORSES.

DR. JOHN C. PETERS, Chairman of a Committee appointed in April last to investigate the subject of scarlet fever in horses, made a verbal report, in which he stated that although the Committee had had but little time as yet to attend to their work, he was firmly convinced that there was no doubt at all that scarlet fever did exist among horses, that it had so existed from time immemorial, and that it was at present in existence in the city of New York. After alluding to the labors of Dr. Stickler on this subject, he remarked that the diagnosis of the affection was often extremely difficult, and that many veterinary surgeons were not as yet willing to acknwledge that it could exist among horses. Among these was Dr. Liautard, who was a member of this committee. As a rule, however, all the best veterinary authorities granted the existence of the disease; and Dr. Peters quoted from a large standard work by Robertson. In modern times, Dr. Percival, a noted veterinary authority, had been the first to call attention to this subject, in the year 1834, and Dr. Copeland, the author of the great medical dictionary, had taken it up with even greater enthusiasm. He stated that scarlatina was a modern disease, which had originated among horses, and which by them had been communicated to men. As a fact, the first record of the disease in the horse was found in the year 1514; while the first record of it in man was not until 1610. This was fully substantiated.

The question naturally arose, Why there were so few cases of the disease? The explanation probably was that, in all large stables, the green horses were put in quarantine for a time after their arrival, as they invariably suffered from distemper caused by their first exposure to the bad air charged with ammoniacal exhalations. While thus suffering, they were also, no doubt, attacked with scarlet fever, but the latter was masked by the more marked symptoms of the other affection. Few cases were noted consequently, because all the other horses had had the disease in their youth. Dr. Peters was of the opinion that the grooms could carry the disease from the stables into their own homes, and, *vice versa*, convey the scarlet fever poison from their homes to the stables.

The next point to determine was, Could the virus from the horse suffering from scarlet fever be used to protect the human subject from the disease? For some time past Dr. Stickler had been engaged in investigating this subject by experimenting with young colts selected with great care, and Dr. Peters said he believed that he was on the eve of establishing this important point. He hoped, therefore, before he died to see inoculation for protection against scarlatina as common as vaccination now was. In conclusion, he trusted that the Society would continue to give the subject some attention, and, as Dr. Stickler would have to encounter much indifference and opposition, that it would endeavor to hold up his hands in prosecuting this good work.

Dr. Peters then spoke of the sanitary condition of the stables of the city, in which were kept one hundred thousand horses. The condition was very bad, he said, in most of the large stables; but he was happy to say that the stables of the Fourth Avenue car line, in which were kept twelve hundred horses, were now a model of cleanliness and salubrity. They presented a marked contrast to what they had been formerly under another superintendent. He concluded his remarks by saying that he trusted that the board of health would soon treat patients suffering from scarlet fever, diphtheria, measles, and typhoid fever in the same way as those affected with smallpox and typhus fever. This would, of course, require an increased appropriation and a larger force of sanitary inspectors, but he believed that if it did not actually stamp out those diseases in the city, it would, at all events, have the effect of greatly diminishing them.

There being now no other business upon the meeting, **Dr. Sturgis** requested that Dr. Obendorfer should be permitted to make

AN EXPLANATION

of what he meant in charging a member or members of the Society with bribing.

Dr. Obendorfer then receiving the permission of the Chair, stated that his object was not to impeach any of the new members, and if he had been thus understood he wished to heartily apologize. The point which he desired to state, however, and which he would have done before if the opportunity had been allowed him, was that positive proofs were in his possession that a member of the Society of long standing had attempted to bribe a member of the profession who did not belong to the Society, but was eligible to membership, to join it and vote a certain ticket in the election to-night. He would mention no names, but was fully prepared to substantiate this statement to the committee before whom the matter would properly come.

Dr. Sturgis remarked that this was a serious charge and moved that it should be referred to the Comitia Minora with full power to investigate.

The Secretary moved that when the Society adjourned it should be to meet at the College of Physicians and Surgeons, on the fourth Monday of November at 8 P.M. Carried.

On motion, the Society then took a recess until the tellers had finished counting the votes. The voting had occupied more than an hour and a half, and the polls were closed at twenty-five minutes to eleven.

THE RESULT OF THE ELECTION

was not announced until a quarter past twelve.

President.			
S. Oakley Vander Poel,	375	T. Gaillard Thomas, . .	220
Vice-President.			
Andrew H. Smith, . .	380	Charles A. Leale, . . .	215
Secretary.			
Wesley M. Carpenter, .	385	E. A. Judson, ...	210
Assistant Secretary.			
Charles H. Amy, . . .	380	P. Brynberg Porter, . .	215
Treasurer.			
Orlando B. Douglas, .	384	Henry D. Nicoll, . . .	208
Censors.			
F. R. Sturgis, ...	385	Charles McBurney, . .	210
David Webster, . . .	383	Richard H. Derby, . .	208
Daniel Lewis, ...	377	Charles S. Wood, . . .	210
F. R. S. Drake, . . .	373	Charles Hitchcock, . .	213
Joseph W. Howe, . .	378	Thomas H. Burchard, .	215

599 ballots were cast in all, but there were some blanks.

The result was the election of the New Code ticket headed by Dr. S. Oakley Vander Poel.

NEWS ITEMS.

PORTLAND, MAINE.

(From our Special Correspondent.)

Litholapaxy.—The information recently stated in The News relative to the progress of litholapaxy by Bigelow's method, suggests that the apparent infrequency of that operation in this country, as shown by statistics therein quoted, is due to the neglect of operators to report their cases.

The number of operations of this nature performed in Maine thus far is small, but may be of some slight statistical value. Professor Bigelow's method was early adopted by the late Wm. Warren Greene, who reported a series of ten cases in the *Boston Medical and Surgical Journal*. One of these cases should be more properly classed as "an attempt to operate," the condition of the patient not warranting a completion of the operation; the other nine were successful. To this report may be added thirteen other cases, all but two successful, reported locally or not at all by other Maine surgeons.

Doubtless our surgeons who have cases affording valuable information have little or no time to write out reports, but it is certain that the profession in Maine are losers thereby, both in information and reputation.

TAIT'S OPERATION FOR REMOVAL OF OVARIES AND TUBES has been successfully performed in this city four times, but no public record of these cases has ever been made.

THE MAINE GENERAL HOSPITAL.—At the annual meeting of the Corporators, held October 9th, plans and estimates were presented with the report of the Superintendent, providing for certain changes in the arrangement of existing rooms, thereby securing new quarters for servants, an amphitheatre, and an increase in the accommodations for patients of sixteen additional beds. These changes are made necessary by increased demands upon the resources of the hospital, at times beyond its ability to meet from lack of room.

The continued prosperity of this institution is most gratifying to its friends and patrons, and its permanent hold upon the interest and good will of the public and profession of this State is now well assured; it is hoped that arrangements may be perfected which will insure the beginning of these much needed additions early next Spring.

THE MEDICAL SCHOOL OF MAINE.—Before long, it is probable that efforts will be made to secure the removal of the Medical School of Maine from Brunswick to this city.

Clinical advantages are now available which ought to be utilized for the benefit of a greater number of students than now enjoy them. This will be accomplished by the proposed amphitheatre at the hospital and a possible out-service, which advantages cannot fail to aid the school in maintaining its deservedly high reputation.

A REGISTRATION LAW AND STATE BOARD OF HEALTH.—Thus far all efforts of the State Medical Association to secure the enactment by the Legislature of a Registration Law and the organization of a State *Board of Health* have failed. A determined attempt was made last winter to secure the former by one of our County Societies, but with no other result than the creation of a favorable public sentiment.

The desired end was nearly secured, the bill having passed a second reading, but "politics" and quackery killed it. Committees were again appointed at the last meeting of the State Association, to labor with the next Legislature to secure these measures of public benefit: they will very likely be delayed, but sooner or later we will have them.

DR. ALEXANDER RAMSAY.—The name of Dr. Alexander Ramsay may be within the recollection of some of your older readers. The *Transactions of the Maine Medical Association*, for 1883, now in press, will contain a biographical sketch of this talented and eccentric man. Visiting this country early in the present century, he lectured in New York and other cities north and south, and in many New England villages; striving to found in the backwoods of Maine "an institute of practical anatomy" to "corroborate faith by facts."

He was at one time an assistant of Dr. Nathan Smith at Dartmouth.

His work on the Anatomy of the Heart and Brain is now a rare book: he not only prepared his own drawings, but engraved the plates with his own hand.

Having been a pupil in London of the Hunterian School, and with the Munroes at Edinburgh, he placed no mean estimate on his own ability; remarking on one occasion that he "recognized only two superiors as an anatomist, GOD ALMIGHTY and JOHN HUNTER."

The record of his observations on the New York yellow fever epidemic of 1803 was published in the *Edinburgh Medical Journal* in 1812.

His therapeutical ideas were far in advance of his time: he never bled, and railed savagely at the prevailing methods of treatment in fevers.

Among his rules for "decorum" in his New York school in 1807 are these:

"Students to remain uncovered in the presence of the teachers. No conversation in the lecture- or dissecting-rooms or museum.

"No tobacco used in any manner in the school. No nauseous appearance of saliva on the floor."

The latter might well claim a modern application in some of our larger schools.

As an anatomist and instructor, he was renowned among the leading men of Europe, combining wonderful talents of eloquence and education with a terrific temper and the most insufferable egotism. His name appears in Knapp's *American Biography;* his death took place in this State in 1824.

The material for the sketch mentioned was gleaned from his collection of papers, books, and specimens formerly in the possession of one of his pupils, recently deceased.

It will be an interesting contribution to medical biography.

YELLOW FEVER AT BREWTON, ALABAMA.—Acting Assistant Surgeon Stone, who was sent to Brewton by Surgeon-General Hamilton, of the Marine-Hospital Service, to make an investigation of the epidemic at that place, in conjunction with a physician from New Orleans, has reported that the disease is yellow fever. Up to the 19th inst., there had been thirty-four cases and eighteen deaths. This is a very high rate of mortality. The population of the town is between 300 and 500, but the disease has not spread to any extent. The adjoining towns have quarantined against Brewton. Three new cases and one death have since been reported.

THE CAPE CHARLES QUARANTINE STATION, established by the Marine Hospital Service, at the mouth of Chesapeake Bay, was closed for the season on the 15th inst. The location of this station is an excellent one, and should Congress deem it advisable to erect permanent quarantine buildings upon Fisherman's Island, the protection from contagious disease of the cities bordering on the bay would be much simplified.

YELLOW FEVER QUARANTINE AT PENSACOLA.—The cordon sanitaire established around the naval reservation near Pensacola, Fla., was ordered to be discontinued on the 25th inst., no yellow fever having developed inside the cordon since the 7th inst., and the last case being convalescent on the 11th.

YELLOW FEVER.—Sanitary Inspector Daniel M. Burgess reports that there were nineteen deaths from yellow fever at Havana for the week ending October 13, and that he had inspected and fumigated twelve vessels bound to United States ports, as follows: Oct. 7—Am. schr. "A. Kingsland," for Key West; Am. bk. "Havana," for New York; Spanish bk. "Sevilla," for New Orleans. Oct. 8—Am. schr. "Nonpareil," for Key West. Oct. 10—Brit. str. "Celtic Monarch," for

New York; Am. schr. "City of Havana," for Key West; Am. ship "Relief," for Key West. Oct. 11—Am. str. "Santiago," for New York; Am. schr. "Dauntless," for Key West. October 12—Spanish bg. "Lola," for Charleston. Oct. 13—Brit. str. "British Empire," for New York; Am. schr. "In Time," for Key West.

Sanitary Inspector R. J. Mainegra reports that there have been eleven deaths from yellow fever in the hospital at Vera Cruz during the week ending October 4th and that he has inspected the following named vessels bound to United States ports: Oct. 2—Schr. "H. Budding," for Pascagoula; schr. "Marian H. Rand," for Galveston; str. "West Indian," for New Orleans; str. "British Empire," for New York. He also states that there has been no yellow fever among the shipping at Vera Cruz for the past month.

The Cholera.—The Consul General at Shanghai, in a report to the State Department, dated September 11, says: Sporadic cases of cholera still continue to occur in Shanghai, but in diminishing numbers. Among foreigners, five deaths from cholera were registered during August, as against ten in July. None have as yet been registered during September. One hundred and twenty were registered among the natives as due to "Tah Shah" in August, and one hundred and twenty-seven in July. The numbers continue to diminish.

The United States Consul at Malta reports to the State Department, under date of September 29, that certain changes have been made in the length of quarantine, imposed by the government, of vessels coming from quarantined ports (other than Egyptian) in which no cholera or other infectious disease exists, as follows:

In the face of the above announcement, a cablegram of the 18th inst. announced that cholera had broken out in a village in the outskirts of Alexandria, which had heretofore escaped the infection. It is believed that the disease was caused by the infiltration into the canal running through the village of water from the adjacent cemetries, in which cholera victims have been interred.

Yellow Fever at Guaymas.—The U. S. Consul at Guaymas, Mexico, in a letter to the State Department under date of October 4, 1883, states that, "While the symptoms are similar to yellow fever, the disease here in the majority of cases has shown that the patient dies either in delirium or a state of coma. That the vomit is alkaline and not acid, nor is it corruptive (destructive?) of textile fabrics, such as bedding, etc. That the urine flows from the body after death of a bright-yellow color; finally, that the vomit lasts from ten to twenty-six hours. These are the main points of difference as noted by the medical profession here and at Hermosillo, but the disease is equally fatal in severe cases as yellow fever. Had this been the genuine type of yellow fever, the deaths would have been quadrupled. Nevertheless, the Board of Health here have pronounced it yellow fever. I am happy to inform you that the disease here is diminishing, only seven deaths in the last three days. In Hermosillo the disease is not so fatal as it was in Guaymas, though there are many sick the ratio of death is less." The Consul adds that he hopes to obtain a complete list of deaths in a few days which he will forward to the Department.

Yellow Fever in Havana.—There were eighteen deaths from yellow fever in Havana last week.

From:	Allowance for Voyage.	Quarantine imposed at Foreign Ports.	Quarantine at Malta, after Disinfection of Vessel.
French ports in Mediterranean,	. . .	14 days, incl. voyage.	7 days, less actual duration of voyage to Malta.
Italian ports in Mediterranean,	. . .	15 " "	6 " " " " " "
Austro-Hungarian ports,	5 days.	10 "	6 " " " " " "
Turkish ports in Levant and Black Sea, *via* Smyrna,	2 "	10 "	9 " " " " " "
Other ports in Black Sea,	. . .	. . . .	9 " " " " " "
Syrian ports,	1½ days.	10 days.	10 " " " " " "
Barbary ports, *via* Beyrout,	4 "	10 "	7 " " " " " "
Cyprus,	1½ "	10 "	10 " " " " " "
Tunis,	5 "	7 "	9 " " " " " "
Ports in Algeria,	6 "	10 "	5 " " " " " "
Spanish ports,	7 "	10 "	4 " " " " " "

Arrivals from the ports of the Kingdom of Greece, on which twenty-one days quarantine is imposed on arrival from Egypt, will be admitted to free pratique. The "sfralto" against passengers from Egypt is maintained for the present. The quarantine against arrivals from Egypt is maintained at twenty-one days, to commence after the disinfection of the vessel at Malta.

Cholera in Egypt.—The Egyptian Minister of the Interior, a fortnight ago, officially published a statement, denying the existence of epidemic cholera in Egypt, and declaring it to be contrary to the opinion of all competent authorities.

Another announcement appearing in the same *Gazette* is a regrettable instance of stubbornness on the part of the Ministry, who must be presumed to be responsible. The Egyptian Star has been conferred on the members of the Board of Health whose failure and gross incompetency, universally admitted, render it almost an insult to the other wearers of the new decoration.

The German Sanitary Commission sent to Egypt some time ago to study the causes, etc., of cholera, having now exhausted their inquiries in that country, have received permission from the Imperial Government to extend their researches to India, the home and cradle of the terrible disease, and they will accordingly soon embark at Suez for Bombay. The Commission, it seems, discovered a new and peculiar micro-organism which may have something to do with the propagation of cholera, and the further studies of the *savants* in India will enable them to see whether their suppositions are correct.

Yellow Fever in Mexico.—Advices from Altata, Mexico, report that the population of that town has been decimated by yellow fever. The number of deaths for two weeks averaged twenty a day.

Smallpox in New Orleans.—For the week ending October 13 there were three cases of death from smallpox in New Orleans.

Typhoid Fever in Quebec.—In three days of the past week, thirty cases of typhoid fever have been received at the general hospital in Montreal, Quebec. Nearly all have been due to bad sanitary conditions in the patients' homes.

A Gift to a Boston Hospital.—The wife of Lieutenant-Governor Oliver Ames has given $35,000 to the Free Hospital for Women, situated on Springfield Street, Boston.

Surgeon-General Wales' Term.—The question as to when the term of office of the Surgeon-General P. S. Wales, as Chief of the Bureau of Medicine and Surgery will expire has been settled. Surgeon-General Wales was appointed August 16, 1879, but his commission was not issued until January 26, 1880. The appointment was for a term of four years. It has been decided by the Secretary of the Navy that Dr. Wales' term began with the date of his commission and that, therefore, he has still about three months to serve. A press despatch states that it is expected that Surgeon-General Wales will be reappointed, although Medical Director Gunnell is being strongly pushed for the office.

Dr. J. C. Hutchison, of Brooklyn, who sustained an extra-capsular fracture of the femur, on the 31st of August, by being thrown from his carriage at Lake George, his many friends will be gratified to learn, is improving satisfactorily, and will probably recover the use of his limb without limp or deformity. This week, for the first time since his mishap, he has been able to walk about the grounds of his residence.

Important Decision of the Supreme Court on Imitations.—Last year, the Supreme Court of Rhode Island, by final decree, enjoined certain parties from offering for sale "Acid Phosphate," so called, in any package which shall be a substantial or colorable imitation of Horsford's Acid Phosphate. On September 24, 1883, the Court decided that William H. Hughes and Theodore S. Hughes had violated said injunction by selling the "Hughes' Acid Phosphate," so called, and that a writ of attachment must issue against them, whereupon they were fined $300 each.

The New School of Medicine in Paris.—The new School of Medicine, which is being built in Paris, consists of two separate edifices, divided by the street called the École de Médecine, the first of which belonging to the Faculty of Medicine, is to be used for the general purposes of the Faculty, and includes the library, general offices, and museum of normal anatomy; while the second, belonging to the Practical School, will contain the laboratories of the professors and all the services relating to anatomy, such as the dissecting-room, lecture-room, collections, etc., as well as a museum of pathological anatomy. The Dupuytren Museum, which was placed in what was once the refectory of the monks, to whom the monastery, which had been converted into a school of medicine, belonged, is to be rearranged, and will have a façade upon the new street, when it is completed. The total length of the frontage of the new schools upon the principal street is upwards of 400 feet, and they will cost, when finished, about £280,000.—*Lancet*, September 29, 1883.

Professor Chevreul.—*L'Union Médicale*, writing of this distinguished *savant* on Sept. 4th, observes: "M. Chevreul, Member of the Académie des Sciences, and Director of the Muséum d'Histoire Naturelle, enters to-day on his ninety-eighth year. In spite of his great age, he assumes the modest title of *doyen des étudiants*, in which he glories; but we may term him far more justly the *doyen des maîtres*, for sixty years of the exceptional labors and services which he has rendered constitute one of the highest renowns of France. Born at Angers in 1786, he entered the École Centrale of that town in his seventeenth year, having Béclard as a fellow-student. In 1811, after some remarkable investigations, he was nominated *aide-naturaliste* at the Muséum, and in the course of some years he became Examiner at the Ecole Polytechnique, Professor of Mathematics at the Lycée Charlemagne, and the Director of the Dye Works and Professor of Chemistry at the Gobelins. In 1826, he succeeded M. Proust in the Section of Chemistry in the Académie des Sciences, and his great reputation became confirmed by his work on fatty bodies of animal origin. This important work procured for him the Argenteuil Prize of 12,000 fr. He then became the Director of the Muséum, in which post he has rendered great services; and in 1875 he received the Grand Cross of the Legion of Honor. One of the most active members of the Institute and of the Society of Agriculture, M. Chevreul still delivers his lectures at the Jardin des Plantes, and directs a portion of the works at the Gobelins."—*Med. Times and Gazette*, Sept. 22, 1883.

The International Sanitary Congress.—All the governments of Europe, with the exception of the French, which is waiting the completion of Dr. Fauvel's report on the recent epidemic, have accepted the invitation to take part in an International Sanitary Congress which is to meet in Rome next month. One of the objects of the Congress is to organize an international service in Egypt, with the view of protecting Europe against the intrusion of Asiatic cholera.

Health in Michigan.—Reports to the State Board of Health, for the week ending October 13, 1883, indicate that erysipelas, typho-malarial fever, consumption, and pneumonia have increased, and that diphtheria and scarlet fever have decreased in area of prevalence.

Including reports by regular observers and others, diphtheria was reported present during the week ending October 13, and since, at seventeen places.

Seventeen cases of typhoid fever were reported in a school at Adrian, October 12.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM OCTOBER 15 TO OCTOBER 22, 1883.

Bache, Dallas, *Major and Surgeon.*—Assigned to duty at Willet's Point, New York.—*Par. 1, S. O. 238, A. G. O.*, October 18, 1883.

Taylor, Morse K., *Major and Surgeon.*—Assigned to duty at Fort Sill, I. T.—*Par. 4, S. O. 210, Department of the Missouri*, October 13, 1883.

Heizmann, Charles L., *Captain and Assistant Surgeon.*—Granted leave of absence for six months, with permission to go beyond sea.—*Par. 3, S. O. 235, A. G. O.*, October 15, 1883.

The Medical News *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the News *should be addressed to No. 1004 Walnut Street, Philadelphia.*

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ORIGINAL LECTURES.

SOME PERSONAL EXPERIENCES OF SURGERY IN TIME OF WAR.

A Lecture delivered, by invitation, at the Bellevue Hospital Medical College, N. Y., October 23, 1883.

By SIR WILLIAM MacCORMAC,
SURGEON TO ST. THOMAS'S HOSPITAL, LONDON.

(Reported by Edward Develin, M.D.)

Gentlemen: When a short time ago your professor, Dr. Dennis, invited me to address a few remarks to his class, I asked him to excuse me, as I was not prepared with any subject-matter which could interest you. He got over that difficulty by choosing a subject for me. The responsibility, therefore, for my being here, and for anything which I may say to you, rests with him and not with me. The subject Dr. Dennis selected is the very large one of Gunshot Wounds. It would take many lectures to discuss so important a topic. He tells me, however, you would like to hear something about these injuries, and more especially my own personal experience.

Now, as a civilian surgeon, my experience of surgery in time of war is, of necessity, limited, and I cannot but think that it is much like "Carrying coals to Newcastle," as we say in England, to talk of gunshot wounds in a country where, perhaps, the largest experience of this kind exists. Your great civil war brought this knowledge to your surgeons, and the teachings of the war are embodied in the splendid volumes issued by the Surgeon-General—a record, which for magnificence, I may say, for completeness of illustration and of detail, possesses no equal in any country in the world. Only the other day I had an opportunity, under the guidance of your distinguished countryman, Dr. Billings, of examining some of the treasures of your Army Medical Museum, in Washington. The number of valuable specimens there contained is enough to stock half-a-dozen museums. Every form of gunshot injury, in every possible variety, is there, and it seems a presumption on my part to venture to talk on this subject at all.

Possibly, however, it may interest you a little if I tell you the story of the experience I have had of surgery in time of war, and I may tell it the more appropriately to an audience such as you are, because it is some account of the doings of the Anglo-American Ambulance during the war between France and Germany, about twelve years ago. I only repeat what others have said over and over again, that the best volunteer aid rendered during that disastrous struggle was rendered by the corps of this ambulance.

That distinguished surgeon, whose reputation is world-wide, and who is loved by all who know him, Dr. Marion Sims, was selected as our chief, and the rest of the staff, some sixteen in number, was composed equally of American and English surgeons. One bright afternoon in the end of August, we left Paris with our wagons and equipment to join the headquarters of Marshal McMahon; and with some trouble and adventure we reached, at last, Sedan, with the intention of pushing on further the next day. Sedan is an old fortified town on the river Meuse, near the Belgian frontier; the fortifications were erected after the fashion of the day, by the great French engineer Vauban; and when we reached the place, which was only a few miles from the scene of the contending armies, the only soldiers, or representatives of soldiers, in or about the town were a few peasants in blouses, keeping guard upon the ramparts and at the gates, armed only with old flint-locks; no regular troops anywhere—not a soldier in uniform. An old army doctor was the only medical man in the whole town, and he besought us to remain, telling us we should find plenty to do. But our orders were to push on, and we determined to try to get further forward, and to reach the front.

Instead of our doing so, the French army rapidly retreated, entered the town, and we found ourselves, without any effort on our part, in the very centre of the scene of the most eventful battle of the war, and assisting at what was to change, at a move, the map of Europe; for next morning, at early dawn, began the battle of Sedan, which was followed by the capture by the German forces of an army of two hundred thousand men, with an Emperor thrown in.

I shall never forget an incident which occurred on the night before, as we lay bivouacked at the railway station, waiting vainly for some train to carry us forward. In the middle of the night an engine, with a cattle truck attached, steamed into the station, and out of it stepped the man who was still Emperor of the French, accompanied only by two or three aides-de-camp. They walked silently to the nearest gate of the town, about three hundred yards away. I followed them. They battered at the gate and called upon the sentry to open. He was afraid, and would not. "Mais ouvrez donc, c'est l'Empereur," cried the aide-de-camp at the top of his voice in the dead silence of the night. The sentinel did not believe the story, and did not open, and at that gate the then ruler of the French was kept waiting for an hour before he could gain admission; it was a scene to awaken many a reflection. There was clearly no reason now for us to go elsewhere, and we also entered the town and installed ourselves in the empty barracks placed at our disposal, a building placed high upon the ramparts and well adapted for the purpose.

Next morning, and all day, the battle was being fought, and very soon the wounded came in to us in large numbers. For several days and nights we had operations going on continuously; all the first day we were under the direct fire of the German artillery. The shells were whizzing past us, and occasionally the splinters struck the building, but it was clear we were not being fired at, else we should have been "knocked into a cocked hat" in no time. Indeed, I met, a few years after, in Berlin, the German officer who commanded the batteries facing the hospital, and he told me he could see our red-cross flag flying, and tried to avoid injuring the building, supposing it to be a hospital. This officer is a son of the distinguished Surgeon von Langenbeck, who lost his other son in the charge of the Prussian Guards, at Gravelotte, where such heavy slaughter took place. We had four hundred beds, and these were soon filled; the corridors were filled with poor fellows badly injured, and they were also sitting on the staircases. In the town, every house was filled; the churches were filled; in all the country houses round about, the wretched wounded soldiers were to be found. There was ten times more, a hundred times more to be done, than our united efforts could accomplish. All that it was possible to accomplish under such circumstances, we endeavored, to the best of our ability, to realize. Amputations, of course, we had to perform in large numbers; some few ligaturing of vessels, chiefly for secondary hemorrhage, and later on a considerable number of resections of the larger joints. It was in the days before the antiseptic method had revolutionized surgical treatment, and a most disheartening number of our operative cases and of more simple wounds, died from blood-poisoning. In the cases of ligature for hemorrhage, the bleeding too often recurred, and the resections in many instances, either ended in amputation or death.

Most of the resections of joints were in the so-termed secondary period. I agree with Langenbeck in thinking primary resections, though performed immediately after the injury, are unsatisfactory. The power of regeneration, the probability of procuring a useful limb or joint, are much less. In the secondary stage, the periosteum has become thick and vascular; it can be more readily detached from the bone, and its powers of ossific reproduction are enormously increased. Immediately after any injury, it is very difficult to detach and preserve it to any extent; it possesses very little power of forming new bone. Besides, there is in the secondary period a better delimitation of the injury; its extent is better known; some of the fragments have necrosed, others show vitality. Cases only fit for amputation have already been disposed of. In resections for gunshot injury of joints, we may lay down for certain the necessity for preserving the periosteum as a condition of success, and we may also affirm that these operations should not follow the formal rules for excision of joints, for in most instances we can save portions of the joint, and, whenever it is practicable, partial excisions are to be performed; they are less dangerous to life, and the functional results are better. I know of several cases in which very complete reproduction of the lost parts has followed, even where large portions of bone were removed.

The ankle-joint and the elbow-joint are the articulations most suitable for surgery of this kind, and after them the shoulder and the wrist. The hip and knee have been seldom successfully excised for gunshot wound. For these, conservative treatment is the only applicable method, viewing the great mortality after operative interference in these two articulations. Indeed, for the cases of penetrating wound of the knee-joint, Bergmann and Reyher have demonstrated, by their experience during the Turco-Russian War, that the method of antiseptic occlusion, healing under an antiseptic scab, with complete immobilization in plaster of Paris, is by far the most successful method of dealing with gunshot wound perforating this articulation. These results, published in Volkmann's Vorträge, are most surprising. If I remember rightly, nineteen out of twenty-one cases recovered not only with preservation of life and limb, but actually with free, and in some cases perfect, movement of the joint.

One case I should like to relate to you of recovery after severe injury, with a useful limb, from my own experience, a case which is, I think, almost unique.

Louis H. Aubin, a chasseur d'Afrique, was wounded by a shell explosion, which laid open both his shoulder- and elbow-joints. The veteran Hanoverian surgeon, Stromeyer, who probably saw more war surgery than any man of his time, told me he is prouder of the invention of his cushion than of any thing else he had done. The risk of any tight constriction in arm is very great. This cushion gives support without constriction, and permits a certain amount of mobility which is so desirable.

In this case, the advantages of the Stromeyer cushion were apparent, and it possesses equal advantages for all fractures of the arm; indeed, in forearm as well as after excision of shoulder- or elbow-joints. In the ankle not less surprising results have been obtained after excision. I may mention one I remember, a case of Langenbeck. A German officer of noble rank was shot through the ankle, and his tibia shattered and ankle-joint laid open. Langenbeck removed the bones forming the ankle-joint, the upper surfaces of the astragalus, three inches of the tibia, and a considerable part of the fibula; yet the reproduction of bone was so complete that the shape of the ankle was not in any degree lost, the malleoli were perfectly reformed, and the power of walking so good that some time afterwards this officer ascended the Monte Rosa, one of the highest peaks in the Swiss Alps, a feat which most persons who never received any injury to the ankle would find themselves unable to perform.

The after-treatment of injury to the ankle is of great importance. The foot must be supported in such a way that it shall remain at right angles to the leg, and neither become abducted nor adducted, everted nor inverted. A case otherwise successful may terminate in the patient possessing a useless foot if these points be not carefully seen after, and to realize this result the closest attention is required.

One thing I hope I have learned from my experience of gunshot injuries, and I should like to teach it to you. It is to do as little probing as possible; the first instinct of the patient is to inquire what has become of the ball, and surgical enthusiasm too often induces the surgeon to hunt after it. He probes the wound, introducing his finger into it, seeks with one forcep after another to pull out the missile, very often tugging at some piece of the unfortunate man's skeleton instead, and most certainly introducing much septic matter into his body, thus laying the true foundation of a dangerous septic suppuration. A joint that might otherwise have been preserved has, indeed, been often sacrificed. A gunshot fracture thus may be robbed of all chance of recovery, and loss of limb, or loss of life, has been the frequent result. A bullet in the body is, as a rule, I feel convinced, a harmless object when we contrast the mere fact of its presence with the incalculable damage which may be done by over-zealous attempts at seeking for it.

In the Army Medical Museum are many specimens which illustrate what I would like to enforce. A soldier was wounded in the knee and elbow; he thought a bullet was in the knee, but the surgeon who attended him, I cannot but think most fortunately, was of the contrary opinion. The man recovered, and was able to use the limb as before. On his death, years after, a ball was found imbedded immediately beneath the articular surface of the condyle, which it had entered after ripping up the front of the tibia, and, therefore, of course, penetrating the joint. In this position it had been imbedded without causing any irritation whatsoever. It may be said that this is a rare event, and so it is, but it teaches a lesson of wide application, and the application of this lesson has been subsequently made with most brilliant results in the case of this very joint, as I have already mentioned, by Professors Bergmann and Reyher.

The veteran surgeon Stromeyer, whose friendship I had the honor to enjoy, pointed another illustration of this fact in his method of treatment of gunshot fracture of the femur. He got better results than anyone else by avoiding all meddlesome interference, and especially by treating the fracture where the man fell or as near to it as might be. Cases recovered and did well in his hands, while similar ones were amputated and died in those of others. *Nur nicht schaden* is the text from which Esmarch preaches when speaking of gunshot injuries, and I think there can be little doubt of its importance.

Gunshot Fractures in General.—I would like for a moment to advert to those most interesting papers recently published by my distinguished friend Dr. Marion Sims. He urges that we should not any longer permit persons with gunshot injury of the abdomen to be simply allowed to die, as has hitherto been the case, without making some effort to save them. He advises that the abdomen should be opened, the injured portion of intestine sought for, the wounded part cut out, the cavity then disinfected, and the external wound closed.

I hope that in some future case this may be attempted —why should it not? The abdominal cavity can be opened with comparatively little risk. Exploratory operations of this kind are done every day. Portions both of the small and the large intestine, large portions even, have been successfully excised, and the cut ends of the bowel sutured together. The pyloric end of the stomach has been excised, almost every abdominal viscus except the liver has been successfully removed. Tumors of the intestine and in the intestine have been successfully dealt with. Dr. Sims' proposal will doubtless one day be also successfully carried out. There are great difficulties certainly, the two principal being extravasation of blood and of fecal contents into the peritoneal cavity, and the possible perforation of several coils of intestine; but extravasation is by no means certain to occur in the comparatively small wound which a rifle-bullet causes. I remember I once sutured a ruptured bladder successfully after escape of urine into the abdomen had taken place, and I cannot help thinking cases of intestinal wound may arise which can also be successfully dealt with.

I have adverted to the fact that the military surgery of the Franco-German war was not practised with the advantages which antiseptic surgery affords. The mortality was very great. In my own hospital, pyæmia and erysipelas were scourges which blasted our best efforts. Since then, the greatest and most unceasing attention has been devoted to perfecting antiseptic methods for use in time of war. They were employed to a considerable extent in the Turco-Russian war, in which I had a vicarious interest in the person of many of my pupils who were present at the great battles of that war; and lately, during the short campaign in Egypt, our own military surgeons treated the wounded with complete antiseptic precautions. The expedition sent out to Egypt was supplied with the fullest and most complete equipment procurable of this kind. What were the results? I speak from memory as to number of wounded: they were, I think, 426, and amongst them many serious injuries and cases needing amputation. Yet this I know, on the most indisputable authority, that throughout this campaign not one single case of pyæmia, of erysipelas, or of any other infectious disease occurred. Not a single instance, in short, of blood-poisoning of any description took place after any gunshot wound during this war. Such a result is quite unprecedented in the history of military surgery in any part of the world.

I need not weary you with any account of the many varieties of antiseptic material recommended for use in time of war.

I believe there is an important future for iodoform. It is efficient, easy of application, and very portable. In cases where the occlusive method of treatment is desirable, in cases of wound of the thoracic cavity, in penetrating wounds of joints, iodoform may prove of especial value.

Gentlemen: What is Surgery? The work of a master hand. The surgeon of olden days was a mere *χειρουργός*. He was a tool which others used. But the surgeon of to-day is something far different, and the work he does is not only of his hand, but of his head, and of his heart, too. Surgery is a fight with death, in which the surgeon is often worsted; but never before in the history of surgery have greater advances been made, or greater victories been won. Never have the arms of the surgeon, literally as well as metaphorically, been so well appointed as they are now. People are apt to speak of conservative surgery as if it were something apart. All surgery is conservative in the truest and best sense. A surgeon who is not conservative is no surgeon at all. He who cuts off a mangled limb, or removes a malignant tumor, does so to save the patient's life. The term is misleading, and should be abandoned. Surgery is a vast field, and our best and most cultured intelligence is not too great to devote to the noble object of alleviating suffering, and directing to safe issue the casualties that may beset us in so many and various forms.

The surgical student should receive the best preliminary training the schools and colleges are able to impart. The future progress of surgery will best be promoted by increased breadth of culture, and increased general knowledge.

The field is vast, but the human mind seems capable of ever-increasing development. New triumphs of skill, a deeper insight into the causes of premature human destruction, yet more effective means of dealing with the many forms of suffering which it is our task to abate, await, without a question, the surgeon of the future, as they have more or less attended the surgeon of the present, and of his brother of former days. Presently, this duty will fall upon you. You can have none nobler or more worthy. May you all endeavor, to the best of your ability, to prove yourselves competent for the task.

One word more and I have done. I wish to say how much I appreciate the compliment of being asked to address you, however imperfectly I may have fulfilled my part of the undertaking, and to say also my best thanks for the patience with which you have listened to me. I am now on the point of returning to my own country, and I return, carrying with me the happiest recollections. I am not vain enough to suppose that the many compliments which have been paid to me, the lavish hospitality and great kindnesses I have received, are attributable to any personal merit of my own. I regard them as expressions on the part of a highly cultured portion of the American people of their love for the old country—for home, as in very many places I have heard it called. During eight weeks of almost constant travel I have heard but one feeling expressed, and I should like on this occasion, the most public opportunity I have had, to say how much this friendly feeling is reciprocated by those at home. I hope and believe that this sentiment will constantly grow stronger. There may be, there are, doubtless, disturbing elements. The growth of such a young giant as is America cannot be quite so even as that of an ordinary child, yet my firm conviction remains that the people of America and of England are in true and cordial sympathy with each other.

LOCOMOTOR ATAXIA.

A Course of Three Lectures delivered before the Cincinnati Medical Society.

By PHILIP ZENNER, A.M., M.D.,
OF CINCINNATI, OHIO.

LECTURE III.

TREATMENT.

Gentlemen: Last year the subject of nerve-stretching in locomotor ataxia was very fully discussed before the Berlin Medical Society. That discussion, which, apparently, forever settled the question of the value of nerve-stretching in this disease, brought prominently forward another important fact, that improvement of the symptoms in locomotor ataxia for a shorter or longer time is no infrequent occurrence. This fact, which had been long known, had not hitherto been sufficiently recognized by the profession. It should never be overlooked when trying to judge of the value of therapeutic measures in the individual case. Of equal importance, lest one be misled by apparent therapeutic results, is the establishing of a correct diagnosis. I can scarcely illustrate this statement better than by the mentioning of a case. A few months ago I was requested by a physician to examine a case of so-called cured locomotor ataxia, where a special value had been attributed to a given remedy. A careful examination revealed that the patient had had an attack of acute ataxia, such as occurs sometimes after infective diseases, diphtheria, etc., or without apparent cause, whose pathology is unknown, and which usually runs its course within a short time, generally terminating in recovery. How easily in such cases one might be deceived as to the value of remedial agents!

There has always been much scepticism as to the value of treatment in this disease. Leyden, in the latest systematic article on this subject, published in Eulenburg's *Real-Encyklopädie*, has unhesitatingly declared that locomotor ataxia cannot be cured; that it cannot even be held definitely in check. This sweeping statement I believe to be too strong, to be disproved by ascertained facts. Nevertheless, we learn from what was above stated that we can be very easily deceived as to the effects of remedial agents, and it is doubtless true that, as yet, the value of none of them has been positively determined.

Before speaking of the various therapeutic measures, of which I will only mention those having the greatest claims to the confidence of the profession, let us inquire, from a purely pathological standpoint, in how far we may speak of the curability of the disease, and of the manner of improvement. If we knew something of its proximate cause, why it originally attacks Burdach's columns, why the primary degeneration later occurs in the same columns in higher portions of the cord, we would be better able to state the probability of checking the disease in its beginning, or in its later stages. But, as it is, some clinical observations and pathological studies will at least enable us to say something of the possibility of a cure and the manner of improvement. Not very infrequently cases have been reported where all the symptoms of locomotor ataxia have been manifested and have later disappeared. Are we to believe that degenerated portions of the cord have been reproduced? I believe not, for experimental researches appear to show that destroyed portions of the cord are not, or at least very rarely, restored. Doubtless symptoms are often produced or increased by transient causes, local congestion, hyperæmia, or the like, and with the disappearance of the latter the symptoms improve or disappear. It is a common occurrence that patients entering a hospital, after lying in bed for a few weeks, improve very markedly, an improvement which can only be attributed to the cause just mentioned. But how is it if the symptoms are caused by destruction of nervous elements in the cord? Erb, in his work on diseases of the spinal cord, reported two cases of locomotor ataxia as about cured. One of these, in whom the usual symptoms, anæsthesia, ataxia, etc., had been manifested, and later disappeared, excepting a slight bladder trouble, after an apparent recovery of about eight years suddenly died of acute poisoning. An examination of the cord made at this time revealed the degenerative changes in Burdach's columns characteristic of this disease. So, in this case, the symptoms had disappeared, while the pathological changes, which probably produced them, remained. Here we must attribute the improvement to vicarious functions, certain nerve-fibres in the cord assuming the functions of those which had been destroyed.

In this sense, then, we may speak of the curability of the disease; that at times transient conditions, hyperæmia, etc., are removed, and the symptoms caused by them disappear; at other times the functions of destroyed portions of the cord are assumed by other nerve-fibres, and, therefore, again the symptoms disappear.

With these ideas of cure or improvement, let us proceed to the consideration of the various methods of treatment. First, a few words as regards general treatment. As exposure to cold may cause or aggravate the disease, the patient should be guarded against deleterious influences of this kind. If he be poorly nourished, cod-liver oil, good diet, etc., are indicated. As the disease often occurs in those of a nervous temperament, rest of body and mind is often called for. We should attempt to relieve him from mental worry or anxiety, forbid mental overwork, and often rest of body will be very beneficial. We have already mentioned that complete rest in bed is often followed by great improvement; but this cannot be always demanded. Exercise is often beneficial. But great muscular exertion should always be discouraged, and, at times, perhaps when the changes in the cord are more active than usual, complete rest will prove very serviceable.

The various symptoms may each demand special treatment, but we will here only refer to one of them, the severe pains. External applications, electricity, etc., may act beneficially; but, after all, our main reliance is opium. And we must here be especially guarded lest our patient contract the opium habit. Remembering that the pains are often not of very long duration, that they sometimes get milder, and even disappear in the later stages of the disease, we must use this powerful remedy as cautiously as possible during the periods of severest pains, and may thereby guard the patient from contracting a habit which would be even a greater calamity than the disease itself.

Of the therapeutic measures intended directly for their curative influence, I will first mention nitrate of silver. This remedy, first recommended by Wunderlich, has since been favorably spoken of by many physicians. A few cures have been reported, but far more frequently merely improvement. The medicine is usually administered in small doses, so that a grain or more is taken daily, and is continued for a number of weeks or months. Eulenburg has recently given this whole subject a careful examination, and asks why it is that, in a few cases, this remedy has acted so admirably, while in the great majority of cases it is entirely useless. He believes the answer to be found in the fact that the nitrate of silver is generally decomposed by the organic constituents with which it is administered, or with which it comes in contact in the alimentary tract or in the walls of the intestines. To overcome this difficulty, he has resorted to hypodermic injections. He uses a solution of albuminate of silver, or a solution of chloride of silver and sulphide of sodium. He states that these solutions are locally non-irritant; and that they are absorbed is proved by their later appearance in the urine. Whether this contribution will add to our success in treating this disease is yet to be determined.

A much-favored therapeutic measure is hydrotherapy, chiefly in the form of hot or cold baths. Baths of a temperature between 70° and 90° are usually given. The cold baths appear to have more frequently proved beneficial; the hot are supposed to be indicated where there are very severe pains, but if not very cautiously used may do harm, as happened to a patient of my own this summer, who tried baths of a higher temperature and more frequently than I had counselled him to use.

We do not know exactly in what way baths prove of benefit. They increase tissue-metamorphosis, and thereby improve the general health. They also appear to harden the system, so that it can better resist deleterious influences, exposure to cold, etc. We can perhaps thus account partly for their beneficial influence. But they also cause an increase of the arterial tension, and perhaps cause local changes of circulation in internal organs, and, it may be, in this way exert their principal curative influence in this disease.

The use of baths is largely experimental. We cannot tell before trying them whether they will prove of value, or what temperature will be best. Generally, baths are taken every day, or every second day, and are of ten or fifteen minutes' duration. If beneficial, they may be continued for a number of weeks or months.

Baths are not the only form in which we can apply hydrotherapy. Hot or cold applications may be made directly to the spine in coils of rubber tubing made for the purpose, or sponge baths may be taken with much benefit.

The method of treatment which has gained the greatest confidence of the profession is the application of electricity. The constant current is most commonly applied. Meyer speaks very highly of applying the positive pole to painful points along the spine. But painful points are not often found, and the most common method is the application of both poles to the spine—one above, the other below—and either leaving them stationary, or moving one slowly up and down. The current may also be applied to the peripheral nerves. The duration of a sitting should usually be short, about five minutes, and only a moderate strength of current used. The current should be applied daily, and for a number of weeks or months. Like hydrotherapy, this treatment is experimental; we cannot tell before trying it whether it will prove beneficial or not.

Rumpf has recently spoken very highly of the value of the electric brush. Influenced by the knowledge that the application of the same had restored lost tactile sensation in hysteria and other conditions, and had even improved motor symptoms, he tried it in this disease, and obtained results even exceeding his expectations. Several cases, with the usual symptoms of locomotor ataxia, appear to have been almost cured, though the lapse of time is too short to say whether this improvement is more than temporary. He applies one electrode to an indifferent part of the body, as the sternum, while the brush is applied over the spine and limbs. The duration of a sitting is ten minutes; the strength of current moderate.

He believes this will prove most serviceable where the sensory symptoms, pain, anæsthesia, etc., predominate. Yet, inasmuch as experiments of his own and others have demonstrated that applications to the surface may cause local changes of circulation in internal organs, it may be that this measure exerts a direct curative influence on this disease.

I have tried this method of treatment in two cases. One, living in a distant city, passed from under my observation too early to observe any effect. In the other there was at least some improvement.

These various methods of treatment may be tried at the same or at different periods of time. A course of hydrotherapy in summer, and of electrical applications in winter, and nitrate of silver or other internal remedies administered at the same time, might be advisable. As the disease is a chronic one, so must the treatment be long continued. The same plan, if apparently beneficial, may be tried for several years. But in old cases, where treatment has proved unavailable, the conscientious physician will advise the patient to abstain from further therapeutical measures, and thereby, at least, spare him useless expense.

Before closing with the subject of treatment, we must approach a question which has been largely discussed in the medical world, that is, whether locomotor ataxia is usually of syphilitic origin. This idea, first brought prominently forward by Vulpian and Fournier, has since found adherents in most parts of the world. It is based upon the observation that in many of those suffering with locomotor ataxia a previous syphilitic history could be obtained. Fournier, in his latest publication, states that he has succeeded in obtaining a history of syphilis in more than ninety-one per cent. of his cases. Erb, in his most recent publication, announces that he has succeeded in obtaining a previous specific history in 91 of 100 cases of locomotor ataxia. To prove the direct relationship of the two diseases, he contrasts the above table with another of 1200 consecutive cases, adults, who did not have locomotor ataxia, and did not come to him directly for syphilis. Of these 1200, only 22.75 per cent. gave a previous specific history. Erb concludes from his observations that not only is there a direct relationship of these two diseases, but also that one, not previously infected with syphilis, scarcely has a chance of becoming afflicted with locomotor ataxia.

It is a further question whether the specific disease directly attacks the cord, or whether, through the constitutional taint, the cord merely becomes more susceptible to disease. The former opinion is generally held, and, in partial confirmation of it, it is mentioned that other diseases, as diphtheria, may cause diseases of the posterior columns, and even some poisons, as ergot, directly attack the same limited parts.

I do not wish to enter into a discussion of the question of the syphilitic origin of this disease, nor to give all the arguments, the various statistical tables, and other considerations on the one side, the contradictory statistics, the pathological changes, the non-success of anti-syphilitic treatment, the occurrence of locomotor ataxia chiefly in men, etc., on the other. For I believe a conscientious study of all that has been brought to bear on the subject can lead us but to this conclusion, that the statement, locomotor ataxia is usually of syphilitic origin, has not yet been proven; that this statement cannot be positively denied. I make this statement thus broadly, because I believe this state of doubt should be fully recognized, as it imposes certain duties upon us.

According to observations hitherto the spinal disease generally begins from five to ten years after the primary syphilitic infection. The syphilitic manifestations appear generally to have been mild, and to have been very slightly treated. The duties apparently imposed on us by these observations are, first, that every case of syphilis should be carefully treated, and for a long duration of time, however mild its manifestations. This is doubtless true whether or not the above relationship of disease exist; secondly, whenever one, formerly infected with syphilis, presents the earlier manifestations of locomotor ataxia, lightning pains, ocular paralyses, etc., he should be put upon a careful and persistent anti-syphilitic treatment.

There is even some encouragement to hope that in the fully developed disease the same treatment may prove beneficial. A number of such cases have been reported, and Rumpf, in the article already mentioned, states that in some cases where there was a previous history of syphilis, he has succeeded, by the combined action of the electric brush and anti-syphilitic remedies, in obtaining flattering results.

But it will probably always appear that far less is to be obtained from such treatment after the disease is once developed than at earlier periods. The future will doubtless prove that in this disease, as in many others, prophylaxis rather than treatment is the highest duty of the physician.

ORIGINAL ARTICLES.

THE TREATMENT OF PSORIASIS.

BY ARTHUR VAN HARLINGEN, M.D.

(*Read before the Philadelphia County Medical Society, October 17, 1883.*)

PSORIASIS is one of the commoner skin diseases met with in this country. The statistics of the American Dermatological Association show that it occurs in the proportion of about six per cent. in all diseases of the skin encountered. Daily experience would seem to indicate a still more frequent occurrence, because the affection is a disfiguring and annoying one, and therefore patients are more inclined to seek relief, and also because it is a stubborn disease and greatly prone to relapse. The history of a single case will often extend over many years, and bring it under the observation of a number of different physicians.

It is because of the comparative frequency with which psoriasis is met and its stubbornness to treatment that I have selected it as the subject of my remarks this evening. Having had a good deal of experience in the treatment of the commoner forms of the disease, it is my intention to confine myself chiefly to the consideration of such remedies as have come under my own observation and use, only touching incidentally on others.

The object of treatment in psoriasis is the removal of the eruption as it exists upon the skin. We cannot hope with any degree of certainty in any given case to prevent a recurrence of the disease, or, if you please, a relapse. For the drug has not yet been discovered which will surely take away all tendency to the recurrence of psoriasis, and whoever promises a cure, in the wider sense of the word, to his patient, will, in a very great number of cases, find that he has been too sanguine. Fortunately, however, a certain number of patients do seem to recover. I do not know what has been the experience of others in this respect, but I have patients who have been under observation three, five, even eight and ten years without relapse. Such cases are, unfortunately, few.

Preëminent among the internal remedies which are useful in the treatment of psoriasis, is arsenic, which may justly be called a specific in this disease. I think I am not asserting too much when I say that eight out of ten cases of psoriasis of average character and severity will do better under the use of arsenic than with any other remedy. I prefer Fowler's solution, given in the average dose of four minims thrice daily. I think this solution is often prescribed in too large doses, and I am sure the dose of five to ten minims, as given in the books, is too large for ordinary use. Most patients bear a four-minim dose very well, but there are idiosyncrasies. I have sometimes been obliged to limit the dose at the beginning to one minim in cases where subsequently such toleration has been established that twelve minims have been taken with impunity. However, four minims is a good dose to begin with, and if the effect does not begin to show itself within ten days or two weeks, the amount may be gradually increased. Fowler's solution should never be given to the patient in a vial with directions to drop out the requisite number of drops. The patient is apt to make a mistake, vials of different sizes may pour out more or less in each drop, and there is always danger in leaving a half empty vial of poison about the house. The solution is better given mixed with water, or with wine of iron or other convenient vehicle.

The effect produced by arsenic upon the eruption of psoriasis is, first, a diminution of the quantity of epidermic scales thrown off, and then in preventing the appearance of new lesions. The patches gradually lose their scaliness, begin to heal in the middle, and disappear little by little. It must be remembered, however, that arsenic is a slowly acting remedy, and its use should be continued through many months to get the best security against relapse.

The other liquid preparations of arsenic used in psoriasis are Pearson's solution of the arseniate of sodium, and Donovan's solution of the iodide of mercury and arsenic. I have used the former in a few cases without noticing any perceptible difference as regards efficiency between it and Fowler's solution. The solution of mercury and arsenic (Donovan's) I have employed, with good effect, in certain stubborn cases where Fowler's solution has seemed to fail. The existence of syphilis as the cause of the eruption in these cases having been excluded, I am at a loss to account for the apparently greater efficacy of the mixed treatment. The dose given was as much as ten drops, and although this solution is weaker in arsenic than Fowler's, yet I am inclined to the opinion that the conjoint administration of the two drugs, mercury and arsenic, was the cause of the good result, rather than the increased dose. I should be inclined to use Donovan's solution in cases where Fowler's solution had failed.

The mixture of arsenious acid, black pepper, and sugar of milk, known as Asiatic powder, and recently placed in the Pharmacopœia, with the pepper left out, among the triturations, is of no particular value above the other preparations, and is not so convenient of administration.

Hypodermic injections of solutions of arsenic have been employed in the treatment of psoriasis, but I have had no experience in their use.

Next in value to arsenic in the treatment of psoriasis is iron. I commonly employ the tincture of iron in cases where arsenic does not seem indicated. There is one type of psoriasis which includes robust, rosy, well-nourished individuals, "the very picture of health." Such people have never been sick a day in their lives, or perhaps may have had slight attacks of articular rheumatism. Such patients do well under arsenic.

But there is another type in which the individual is thin, poorly nourished, and perhaps somewhat anæmic. These are the cases which do well under iron, which is best administered in the form of the tincture of the chloride. With these two remedies, arsenic and iron, I usually succeed in curing ordinary cases of psoriasis, adding in rare cases cod-liver oil to the use of the tincture of iron when debility is present. Of course, local applications are employed at the same time. Of these I shall speak presently.

In addition to the internal remedies mentioned, quite a host of others have been employed from time to time. Such are tar, carbolic acid, copaiba, phosphorus, tincture of cantharides, tincture of maize, carbonate of ammonia, acetate of potassium and other diuretics; the alkalies, as liquor potassæ and the alkaline mineral waters. Of these I have found alkalies and diuretics useful in cases when a markedly inflammatory condition of the skin has existed. The other remedies I have not employed, nor do I think the reports of their usefulness based on a sufficient number of facts, except in the case of tar possibly, to make it worth while to try them.

Equally important with the internal treatment of psoriasis is the external management of the disease. It is, of course, desirable to remove the eruption as soon as possible wherever it may be situated; but when it is found upon the face, there is every reason to endeavor its cure by all means and in the shortest time. External and internal treatment should therefore be combined when practicable. The first thing to do is to remove the scales. This may be done by means of local or general baths, wet dressings, etc., or by inunctions with fats and oils, by the use of soap, or by the action of impermeable dressings of India-rubber or oil silk. When only a few lesions are to be acted upon, a solution of salicylic acid in alcohol, 1 part to 16, well rubbed in with a sponge, will remove the scales very nicely.

The scales having been removed, the next thing is to apply such substances to the diseased patches as may most quickly modify the abnormal condition of the skin, and bring it back again to a healthy condition.

An innumerable number of applications have been recommended for this purpose, the most of which I shall pass over with only a mention. Such have been soaps and alkalies, citric and hydrochloric acids, sulphur, iodine and mercury, alone and in combination, together with the various forms and preparations of tar, creasote and carbolic acid.

All of these remedies have their uses, and most of them, especially the tarry preparations, I have employed time and again in years gone by, and with moderate satisfaction. The introduction, however, of chrysarobin or chrysophanic acid, some six or seven years ago, put quite a new face on the local treatment of psoriasis; and since then, with the aid of this and other later discoveries, we are able to work a much more rapid change in the appearance and condition of the skin in this disease.

As chrysarobin is perfectly well known to all here present, both as to its advantages and defects, I shall say but little about it in the ordinary form of its application—namely, as an ointment. When it first came out, I tried it quite extensively, but its disadvantages seemed so great that I had already begun to restrict its use greatly in my practice, when a new agent appeared, which, for every-day use, has in my hands, until very recently, almost entirely superseded all other local applications. I refer to pyrogallic acid.

I do not think pyrogallic acid is by any means so well known as an application for the relief of psoriasis as is chrysarobin. If I may judge by the infrequency with which its virtues are mentioned in the journals (although I believe all recent text-books speak of it), it is not in general use. But it is, in my opinion, one of the very best remedies we have for the cure of cases of psoriasis of average severity. Employed in the form of ointment, of the strength of one-half to one drachm of the pyrogallic acid to one ounce of simple ointment, the effect produced by it is almost as rapid and decided as that brought about by chrysarobin, without the accompanying discoloration. A slight blackish staining is all that is produced, and the ointment can even be employed in the scalp without markedly discoloring the hair, if applied cautiously. It is desirable, however, not to apply soap or alkalies at the same time, because this causes a more permanent and deeper stain.

Pyrogallic acid cannot be used in extensively generalized psoriasis, when large surfaces are affected by the disease, without a certain amount of danger from absorption, as indicated by strangury and olive-green or tar-colored urinary secretions. With care, however, and the occasional suspension of the remedy for short periods, I believe this remedy could be employed even in universal psoriasis with good effect.

One more external application in psoriasis remains to be spoken of—namely, naphthol. This drug, a derivative of coal-tar, was introduced into use several years ago by Kaposi, of Vienna, as a sort of substitute for carbolic acid. He recommends it very highly in psoriasis, in the form of ointment, about eighty grains to the ounce, and I have used it in this and other strengths, and also in solutions in alcohol and oil, with fairly good effect.[1]

Naphthol is not so active in its effect as chrysarobin or pyrogallic acid, but it is much more agreeable, and is, I think, peculiarly well adapted for employment upon such parts as are exposed to the view, as the face and hands. Like pyrogallic acid, it must be used with caution over large surfaces, as absorption, with toxic effects, may be produced.

It remains to mention briefly two or three methods of application of those remedies which have recently been brought forward. The first of these is the treatment by medicated gelatine which was introduced by Prof. Pick, the well-known dermatologist of Prague. My attention was first drawn to this by a pamphlet which Prof. Pick kindly sent me, in which he gave an account of his earlier experiments with medicated gelatines, but I have not as yet had an opportunity of testing this method of medication as I should desire. I may say, however, that the method does not seem to me calculated to prove convenient and popular in private practice. I had for some time been making some experiments in my service at the Polyclinic in the preparation of gelatines impregnated with chrysarobin and pyrogallic acid, but without much satisfaction, when Dr. Chas. L. Mitchell, the well-known pharmaceutist of this city, sent me some excellent preparations of his own, which seem to be perfectly adapted to the purpose for which they are intended. A bit of one of these gelatine sticks is cut off and placed in a water-bath, where it soon melts into a clear homogeneous fluid, which may then be applied to the lesions of the skin by means of a paint-brush. The advantages claimed are cleanliness and transparency. The coating of gelatine does not rub off on the clothes, and is therefore not so dirty as an unctuous application. A fresh coating can be painted on every day or two as the old layer wears off. The chief disadvantage of this method of treatment is that it requires apparatus which is not convenient to carry about, nor can the patient be trusted to employ it at his discretion. My own experience is that, in psoriasis at least, the gelatine applications are not active enough. I have not, however, used them with sufficient frequency to pronounce a positive opinion.

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[1] In a communication read before the American Dermatological Association, last month, and published in the AMERICAN JOURNAL OF THE MEDICAL SCIENCES for October, I have given the results of my experience in the use of naphthol in various diseases of the skin, psoriasis among the number. I may refer to that paper for further details as to the action of the drug in this disease.

Recently a solution of chrysarobin in collodion has been recommended in the treatment of psoriasis by Dr. George H. Fox, of New York, and several dermatologists have confirmed his statements with regard to its efficacy. I have employed this preparation in one or two instances, but it has seemed to me so much less active than the chrysarobin ointment that I have not been encouraged to continue its use. It has one great advantage over the gelatine applications, however, and that is that it can be applied extemporaneously and without the paraphernalia which must accompany the use of the gelatine.

A few weeks since, a pamphlet by Prof. Auspitz, of Vienna, reached me, in which that distinguished dermatologist recommended liquor gutta-perchæ as a vehicle for the application of chrysarobin. I at once obtained a ten per cent. solution, or rather emulsion, of chrysarobin in liquor gutta-perchæ, and happening to have a case of psoriasis of the face and scalp under treatment, I gave some to the patient to apply once daily. The effect was so happy as to encourage me very much to hope that we have in this preparation the most convenient method of applying chrysarobin yet devised; and as chrysarobin is, after all, the most efficient local agent in the treatment of psoriasis as yet brought forward, I have no hesitation in urging the trial of this preparation on any one who may have a case of psoriasis under treatment. It is to be noted, however, that the same watch must be kept upon the skin for fear of exciting dermatitis as when the ointment is used. When the liquor gutta-perchæ dries, which it does very quickly, there is little or no danger of rubbing the chrysarobin over the good skin, nor is there much danger, if any, of staining the clothing.

RAILROAD INJURY.

RUPTURE OF THE ABDOMEN, WITH LACERATION OF THE NECK OF THE BLADDER AND PROSTATIC PORTION OF THE URETHRA; FRACTURE OF THE PELVIS; OCCLUSION OF THE EXTERNAL ILIAC ARTERY; AMPUTATION OF THIGH ON TENTH DAY; DEATH IN THIRTY-FIVE DAYS.

By I. S. STONE, M.D.,
OF LINCOLN, VA.

F. N., male, æt. 21, was caught between the couplers (drawheads) of freight cars on August 9. The writer witnessed the accident. The patient was saved from instantly being cut in twain by the cars not entirely closing together. Patient at once became pallid and nearly pulseless. Large quantities of ammonia and brandy were administered, and by enforcement of the prone position the patient was probably saved from speedy death. Examination revealed a wound extending from the median line, at the root of the penis, over the pubic bone, horizontally to the left five inches, opening the abdominal cavity, by pressure of Poupart's ligament with muscular attachments, backward toward the sacrum. The intestines were fully examined through the wound, and as no rupture was discovered, the wound was dressed and closed temporarily. The patient was treated for shock in the usual manner.

As three hours had elapsed since the patient had passed urine, the catheter was introduced for diagnostic purposes, but no urine was found. A small quantity of blood was discharged. It was then discovered that urine was discharging from the wound, which continued for twenty-seven hours, when a half pint was found in the bladder. After this time, a flexible catheter was retained in the bladder until the fifth day. The abdominal wound was thoroughly cleansed of urine, and solution of carbolic acid in glycerine and water used as an injection down to the base of the bladder. The wound was then closed permanently, and soon healed.

Large quantities of morphia were required for the first forty-eight hours, to control the pain in the nerves of both legs. Sensation was entirely absent in left leg from knee to toes. The external iliac artery was occluded, the circulation having entirely ceased throughout. Traumatic fever set in after recovery from shock.

On the 14th, the fifth day, the catheter was removed, and during the day a half pint of urine was passed normally. After this time, the patient continued to pass urine without the help of the catheter. The bowels were moved naturally on the sixth day.

Eight days after the accident, the left leg gave signs of gangrene below the knee. The temperature in the mean time was 100° to 104° F. On the ninth day, a severe rigor, lasting an hour, occurred. Temperature 106.3°; pulse 120. Amputation was decided upon as the only resort.

On the tenth day, the thigh was amputated in middle third, using carbolic spray and the usual antiseptic care. The collateral circulation had become established, and the stump healed rapidly. The abdominal wound also improved. Peritonitis was only slightly developed. Two weeks after the accident, a pus cavity was discovered at the base of the bladder, which was thoroughly drained with the catheter by aspiration, and washed out with a solution of potash permanganate. This treatment was continued every twelve hours. The prostate gland was very nearly absorbed.

Three weeks after the injury, the patient continued to suffer from high temperature and pulse; the former 101° to 105° F., the latter 110 to 120. Slight rigors.

For four weeks the patient was in constant stupor, except when aroused. A large abscess opened on the back, at the junction of the posterior-superior spinous process of the ilium with the sacrum, extending to and around the acetabulum, and through the sacro-sciatic foramen.

After five weeks of persistent sustaining and stimulating treatment, the patient finally succumbed to septicæmia.

An average of one gill of strong beef-tea was taken every three hours during the five weeks. Large quantities of milk, with "Mellin's food," were also given. Beef peptonoids and pepsin and dilute muriatic acid were given with domestic beef-tea when the stomach gave signs of weakening. It has never been my experience to see such large quantities of food given and assimilated under such circumstances. Quinine was freely given, and after the first rigor, the patient did not suffer from them severely.

Autopsy.—The symphysis pubis was disarticulated; the peritoneum was free from inflammation, save over the right kidney. Both kidneys were congested. Liver, stomach, and intestines were healthy. An abscess was found in front of and to the left side of the bladder and rectum, capable of holding nearly a pint of fluid, and connecting with the abscess outside of the pelvis. The prostate gland was absent. The rupture extended through the prostate and the neck of the bladder. The left external iliac artery and vein were closed. A large quantity of pus was found along the course of the vein (femoral), extending down into the stump about seven inches. The stump was nearly healed in spite of the adynamic condition of the patient.

The noteworthy features of the case may be summarized as follows:

1. That the patient rallied from shock.
2. That peritonitis did not follow and cause death during the first week.
3. That the amputation was successful (mixture of ether and chloroform, 2 to 1, was used).
4. That large suppurating surfaces did not cause death at an earlier period.
5. That the digestive organs continued in such healthy condition.

In conclusion, I must acknowledge the invaluable services of my friend, Dr. Townsend Heaton, of Hamilton, Va., who kindly assisted me in the case, and to whom I shall always remain indebted for his hearty coöperation and sympathy.

NOTES ON FISHBERRIES (COCCULI INDICI), AND A UNIQUE CASE OF FATAL POISONING THEREFROM.

By THOS. S. SOZINSKEY, M.D.,
OF PHILADELPHIA.

The *Anamirta cocculus*, a climbing shrub, indigenous to India and Ceylon, is the source of the *cocculus Indicus*, or *Indian scarlet berry*, or *bacca Orientalis*, or *Eastern berry*, or *fishberry*—the last the vulgar name of it. The names given to this fruit are deserving of a little study. *Cocculus Indicus*, *bacca Orientalis*, and *fishberry* are each open to criticism, because it is not a berry at all. The German name, *fischkorn*, plural *fischkörner* (spelled *fischkkörner* in *The National Dispensatory*—a typographical error)—or *fish-grains*, is too indefinite; and although not open to this objection, the French name, *coque du Levant* or *Levant shell*, mistranslated *Levant nut* by some, is also wrong. It is not a *berry*, nor is it a *nut;* and it is certainly more than a *shell*. This fruit is really, like the *butternut*, what botanists call a *tryma*, which is a dryish form of *drupe*, of which the *plum* and *peach* are examples. I may further say that *cocculus Indicus*, the singular, is generally used when the plural is proper, and that the name *fishberry*, so called from its use to destroy fish, the one by which it is known by the public, is not given in most of the books, so that the medical graduate may be utterly at a loss to know what the old woman around the corner is talking about when dilating on its value, if it be properly applied to Johnny's head or to the bedstead.

It is beyond my purpose to give a description of the cocculus Indicus and its properties and uses; but a few words thereon may be in place. Each is somewhat kidney-shaped, rough, blackish, and about a third of an inch in diameter. When split in two, in the line of its greatest diameter, the kernel is seen to be markedly crescentic in form: hence the name of the order of plants *Menispermaceæ* (from the Gr. *mene*, moon, and *sperma*, seed), to which the *anamirta* belongs. The active principle *picrotoxine* (from the Gr. *pikros*, bitter, and the L. *toxicum*, poison, literally *bitter poison*) was obtained from it as early as 1819. Another principle, named *menispermine*, has been obtained from the epicarp. Both are extremely powerful in their effects. A twentieth of a grain of picrotoxine is sufficient to kill a rabbit weighing three pounds. The dose is about one-eightieth of a grain. Of a tincture made from the fruit, in the proportion of one to eight, the dose would be about five minims, but no such preparation is in use, picrotoxine being preferable.

Cocculus Indicus is a good deal used as a parasiticide. Some medical men, and among them Prof. Gross, have a partiality for it as a remedy for pediculi. It is one of the best of the cures for ringworm in all its forms. As four hundred pounds or so are imported yearly, it must have many patrons; but some of it may be used in beer, which, it is said, is sometimes done by the unscrupulous, it having the property of imparting the desired fulness and apparent richness as well as bitterness to that beverage when malt and hops have been sparingly used in its production. The remedial properties of picrotoxine have not yet been sufficiently investigated and popularized. Admirable effects attend its use against night-sweating in phthisical and other cases.[1]

Cocculus Indicus, or rather the active principle, picrotoxine, is possessed of properties somewhat similar to those of strychina. As said recently by a learned authority—Prof. Stillé[2]—when it is administered to animals, it causes "dulness, muscular tremors, and convulsions and tonic spasms by turns, the body being strongly bent in opisthotonos." Unlike strychnia, it produces gastro-intestinal disturbance, and the spasms are apt to be clonic. Its power is exerted chiefly on the motor-spinal centres. Recent experiments have been made by Professors Chirone and Testa, of the University of Padua. These investigators found that picrotoxine may determine true epileptic attacks, even to the cry. There is loss of consciousness; the animal falls; there are abundant salivation, tonic and clonic convulsions, loss of urine, convulsive rolling of the eyeballs, and the action of the lungs and heart is arrested. The convulsions are of spinal and bulbar origin, and are more intense after the removal of the higher centres.[3]

In regard to its effects on the human subject, Prof. Stillé says: "There is no case on record in which cocculus Indicus, or picrotoxine, has produced in man such spasmodic phenomena as have just been described. Its chief effects in excessive doses appear to be slight giddiness and lightness of the head, and partial loss of power in the lower limbs. In one case only have symptoms of active poisoning by cocculus been described. Among them were gastro-intestinal irritation, congestion of the brain, strabismus, sweating, exhaustion, and death. The absence of any spasmodic phenomena throws doubt upon the alleged nature of the attack."

The rather remarkable fact that no case of fatal poisoning from cocculus Indicus or its active principle, picrotoxine, is recorded renders of interest the report which follows of what I observed in a case of the kind which recently fell into my hands:

B. McV., aged thirty-nine years, a man of medium strength, drank by mistake several ounces of whiskey in which a handful of fishberries had long been steeping, the preparation being intended for the destruction of bedbugs. I saw him a little less than an hour afterwards. He had vomited once before I reached him, but there was no recurrence of it, although mustard and salt and alum were given to cause it. I found him totally unconscious, a condition in which he remained to the end, and powerful general convulsions were following one another every five minutes or so, each lasting about two minutes. Between the convulsions there was perfect relaxation; hence they were very pronouncedly clonic. There was considerable opisthotonos. Each convulsion began with twitching of the muscles about the left corner of the mouth. As each attack came on, there was more or less of an outcry, as in epilepsy, and, as in that disease, some frothing was observable at the mouth. The pupils were markedly contracted. Respiration was extremely slow, and grew more so to the last. The action of the heart was not very noticeably disturbed. There was profuse perspiration. Decided diarrhœa came on within two hours. Death occurred just three hours after the fatal dose was taken, and was apparently due to failure of respiration and exhaustion. By way of counteracting the symptoms, half a grain in all of sulphate of morphia was used, and was given hypodermically. After using it, the convulsions did not occur so frequently, but their power was not lessened in the least. No chloral or anything besides the morphia was used.

2210 FAIRMOUNT AVE., PHILADELPHIA.

MEDICAL PROGRESS.

TRISMUS AND TETANUS UTERINUS DURING LABOR.—From a number of cases observed, **ROPER** draws the following conclusions:

Trismus comes on at the beginning of labor; it comes on in premature labor when the cervix and the lower part of the uterus is not completely dilated.

It is generally associated with a vicious presentation. In some cases this vicious presentation is not rectified by uterine action, as the uterine body remains inert while the spasm of the cervix continues. Also, when trismus of the cervix is accompanied by uterine tetanus there is no tendency toward expulsion of the fœtus.

Although cervical trismus is not accompanied by uterine contraction, it is associated with a systemic weakness which tends to a fatal termination. It is not infrequently associated with placenta prævia. Roper has not found any efficacy in the proposed methods of treatment.—*L'Indipendente*, June 25, 1883.

TREATMENT OF EXTRA-UTERINE PREGNANCY.—The indications for treatment are: 1. To kill the fœtus. 2. To open the sac and remove the fœtus by ovariotomy. The fœtus may be destroyed by puncturing the sac by means of a trocar introduced through the abdominal wall or through the vagina, and the amniotic fluid removed; by puncturing the fœtus itself and killing it; by injecting morphine into the fœtus; or by electropuncture. For opening the sac, laparotomy should be performed with antiseptic precautions.—*L'Indipendente*, June 25, 1883.

PORRO-CÆSAREAN OPERATION.—PROF. **MARTINO** recently performed this operation on a rachitic woman. Strict antisepsis was employed, the operation resulting favorably for both mother and child.—*Revist. Clin. dell' Univ. di Napoli*, August, 1883.

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[1] Vide The Medical and Surgical Reporter, Jan. 14, 1882, for some very enthusiastic remarks on the subject by Dr. F. P. Henry, who had used it in a hundred cases.

[2] National Dispensatory, 2d ed., 1879.

[3] Vide London Med. Record, May, 1883, or N. Y. Medical Abstract, June, 1883.

PAINLESS TREATMENT OF CONDYLOMATA.—NUSSBAUM (*Münch. ärztl. Intell'bl.*, 1882) recommends the treatment of small condylomatous patches on the penis by daily washings with salt solution followed by the sprinkling over them of calomel powder. Chemical change takes place and corrosive sublimate is produced; the condylomata disappear, and no pain is felt. Solution of corrosive sublimate in collodion, which acts more quickly, gives rise to much pain, and requires the patient to rest in bed. The proposed method is not new, but has fallen into unmerited disuse.—*Practitioner*, October, 1883.

GASTROSTOMY IN CUBA.—On September 7th, DR. DON RAIMUNDO MENOCAL performed, at the Hospital San Felipe y Santiago, in Havana, gastrostomy on a man, æt. 60 years, for carcinomatous stricture of the œsophagus. The *Cronica Medico-Quirurgica*, Sept. 1883, in reporting the case, fails to say whether or not the patient recovered.

PRIAPISM IN LEUKÆMIA.—In a Hungarian medical journal, PROF. KÉTLI, of Buda-Pesth, has described a case of leukæmia, accompanied with priapism. A man, aged 35, was seized last October with a severe attack of paludal fever, followed by bronchitis; since that time, priapism had been present. At first, the erections occurred daily, lasting for several hours, and totally unaccompanied by subjective phenomena of any kind; but, for the last two weeks that the patient was under observation, priapism had been continuous, and very painful. The morbid condition was confined to the corpora cavernosa, the glans being perfectly unaffected; the urethra became so compressed by the swelling of the cavernous part of the organ, that the catheter had occasionally to be used. The spleen was enormously enlarged, and the proportion of colorless corpuscles in the blood was greatly increased. No enlargement of the lymphatic glands could be detected. Lupulin and bromide of potassium had been given as remedies for the priapism, but without effect, as might be supposed, since the symptom was related, more or less directly, to a constitutional affection that needed other treatment than the administration of sedatives. Prof. Kétli observes that Longuet describes a case of leukæmia, where priapism came on, and lasted for six weeks. Salzer found the same condition in five out of eight cases of leukæmia under his care. The true relation of the symptom and the constitutional disorder remains as yet unknown.—*Brit. Med. Journ.*, October 13, 1883.

TREATMENT OF THE PLACENTA AFTER BIRTH OF THE CHILD.—PROF. DOHRN sums up the comparative results to the woman, in cases in which the placenta was left to nature, spontaneously expelled, or treated by Credé's method.

1. In one thousand lying-in-women, in whom the expulsion of the placenta was left to nature, the results were far better than in one thousand others in whom Credé's method of expulsion was used.

2. The one thousand lying-in-women in whom the placenta was spontaneously expelled, had considerably less hemorrhage and fever after delivery. In those cases treated by Credé's method, portions of the membranes were frequently retained, and there were more fatal cases than in the others.

3. The disadvantages which are conditional to the method of Credé, are especially seen in the cases in which the placenta is expressed during the first five minutes. After a longer time the expression was more complete, but never as safe as by the spontaneous method.—*Deutsche med. Wochensch.*, Sept. 26, 1883.

MIDWIFERY FORCEPS LEVER.—DR. WILLIAM HENRY TAYLER describes a new instrument recently invented by him to aid in forceps delivery. It consists of a square block of wood, scalloped out on its under surface to make it fit well into the bed or mattress. In the centre of the block is a perpendicular lever, working in a ball-and-socket joint. To this lever is attached a leather strap with a ring, which works up and down the lever in circular grooves about one inch apart, according to the height required. To the other end of the leather strap is fixed a hook for attachment to the forceps On one side of the block, that placed towards the foot of the bedstead, is attached another leather strap, with holes at intervals and a hook at the end. This strap is passed round the rail of the bedstead, and the hook inserted into one of the holes according to the length required, and keeping the block in the desired position.

Each handle of the forceps terminates in a flat ring, the two, when placed together, forming one ring, in which is inserted the hook on the strap attached to the lever; the forceps are also fitted with an improved catch, which easily and securely fastens them when locked.

In using this machine, the woman having been placed in the proper position, and the lever-block placed on the bed and fastened according to the distance required, and which can be readily shortened or lengthened, the forceps are introduced, locked, and fastened by the improved catch: then the hook of the strap attached to the lever being inserted within the ring on the handles of the forceps, the instrument is ready for use.

The accoucheur, sitting by the side of the bed, places one hand on the lever, and manipulates with the other to feel the gradual descent of the head, and so regulates the force of the lever, that the traction can be increased or lessened with the greatest nicety and precision, while the leather strap allows the head and forceps to rotate at will. The lever being fixed with a ball-and-socket joint, the extension can be made in any direction. As soon as the head has been brought sufficiently low down, the lever can be unhooked from the forceps, and the head brought through the vulva in the ordinary manner.

The advantages claimed for the midwifery forceps lever are—1, increase of power with less exertion; 2, it allows of the proper rotatory movements of the head; 3, it works on a level plane; 4, there is an easy graduation of the force employed; 5, it enables the accoucheur to work in a sitting comfortable position; 6, it can also be used for reducing dislocations.—*Brit. Med. Journ.*, Oct. 13, 1883.

TREATMENT OF PERINEAL RUPTURE BY IODOFORM.—BEHM, after nicely cleaning the perineal wound, dusts it over with iodoform powder, and then brings the edges together. A very small quantity of iodoform is used, in order that union may, if possible, take place by first intention, as has been the case in some of Behm's operations. After the edges of the wound are brought together, he uses a dressing containing iodoform, and covered by cere-cloth. By this means, the wound is protected from the vaginal discharges.—*Bull. Gén. de Thérap.*, Sept. 30, 1883.

MUSCULAR ATROPHY IN RHEUMATISM OF JOINTS.—DR. LUIGI PETRONE (*Lo Sperimentale*, May, 1883) has collected a few cases in which muscular atrophy accompanied or followed immediately upon rheumatic inflammation of the larger joints, especially of the shoulder and knee. The deltoid and triceps suffered especially. The atrophy showed itself about the beginning of the second week after the articular pain;

sometimes there seemed to him more loss of power than atrophy, sometimes the reverse. Similar muscular atrophy was noticed by M. Valtat after traumatic injury of the joints (*Archives générales*, 1879, p. 159); in some cases occurring more rapidly, even within twenty-four hours of the injury. This led Dr. Petrone to a series of experiments consisting in the artificial induction of acute synovitis in animals. He found, on post-mortem examination within ten or twelve days of the experiments, that the muscles in the neighborhood of the inflamed joint had lost ten to thirty per cent. of their weight. The nerves showed nothing abnormal. He does not pretend to determine the method of the influence of the joint affection on the surrounding muscles, but urges that the effects are too rapid to be explained either by the atrophy of disuse, or by Vulpian's hypothesis (*Leçons sur l'Appareil vasomoteur*, vol. ii.) that the irritation of the articular nerve produces an effect on the gray matter of the spinal cord which leads to the muscular atrophy.—*Practitioner*, October, 1883.

FISTULÆ OF THE URACHUS.—DR. S. HERMANN has observed two cases of fistula of the urachus at the polyclinic service of Prof. Baginsky at Berlin. In one case there was a fistulous opening one and a half inches wide leading into a suppurating tract. There was no communication with the bladder or the intestine. In the second case a small catheter could be passed into the bladder through an opening in the umbilicus, urine mixed with pus flowing out. Both cases recovered; the first spontaneously, the second after syringing with solution of thymol, cauterization with nitrate of silver, and lead-water cataplasms.—*Centralb. f. d. med. Wissensch.*, June 16, 1883.

INFLUENCE OF MALARIA ON PREGNANCY AND THE PUERPERAL STATE.—GOTH, of Klaussembourg, a very malarial place, has had very favorable opportunities for studying this subject. From his observations it seems that: 1. Pregnancy gives no immunity from malarial infection. 2. Malaria predisposes to abortion, and especially to premature labor: it causes premature labor (*a*) by the death of the fœtus, produced either by the high temperature of the mother, or by the direct action of the infecting principle on the fœtal organism; (*b*) by bringing on uterine contractions, MacRunge having demonstrated experimentally that an elevation of the temperature to 40° C. causes uterine contraction. As in all paludal affections and symptoms, quinine is the remedy to be relied on.—*L'Indipendente*, June 25, 1883.

HEREDITARY SHORT-SIGHTEDNESS.—Considerable attention has lately been paid in Germany and Switzerland to the question of the increase of myopia amongst school children and students generally. Dr. Cohn has, in a recent number of the *Gesundheit*, summarized various statistics on the question of hereditary short-sightedness, which have from time to time been collected by Erisman, Scheiding, Pflüger, and other authorities on the subject. The researches of the last-named writer resulted in the following facts being elucidated as to the percentage of short-sighted pupils: Public schools: Without predisposition, 8 per cent.; with predisposition, 19 per cent. Higher schools: Without predisposition, 17 per cent.; with predisposition, 26 per cent. The difference of about 10 per cent. in favor of those children without a hereditary predisposition to short-sightedness is, according to Pflüger's opinion, a reliable basis of argument. At the same time, he asserts that this relatively low figure is arrived at after the necessary elimination of those cases where the predisposition has remained latent, and where it is of such a nature as only to become the source of ocular affection under circumstances of an unfavorable character. The quoted opinions of oculists, such as Von Arlt, Kotelmann, Loring, Nicati, and Javal, vary from each other in the manner of regarding the question at issue. Those who acknowledge the existence of such a predisposition consider that its importance should not be over-estimated. The statistics published on the matter are regarded as hardly sufficiently conclusive to allow of a definite solution of the question at the present moment.—*Lancet*, October 13, 1883.

NUCLEATED RED CORPUSCLES IN ANÆMIA.—HAYEM (*Archives de Physiol.*, No. 3, 1883), like Cohnheim, Litten, Erb, and others, has found nucleated red corpuscles in the blood of six anæmic patients, two suffering from gastric cancer, one from pernicious anæmia, one from post-puerperal anæmia, and three from leukæmia. The nucleated corpuscles were always few (two or three in several thousand), and were not detected in fresh blood, but only after various methods of preparation. Some of them resembled fœtal blood-corpuscles, others were like the cellular elements of the fœtal bone-marrow or spleen-pulp.—*Practitioner*, October, 1883.

SPECULUM FOR UTERINE ELECTRIZATION.—M. Dujardin-Beaumetz has presented to the Académie de Médecine, for DR. DRISLER, the inventor, a speculum for uterine electrization. It is an ordinary cylindrical speculum, made of some non-conducting material, and furnished at the end with a metallic ring, which connects with a conducting stem, the latter passing out along a groove in the speculum. This stem terminates at the external end in a convenient handle, so as to render it easy of introduction, and a slot for the battery wire of one pole, the other pole being applied to the abdominal wall. Dr. Drisler has obtained good results with this instrument in various uterine neuroses, due either to abnormal nutrition or to irregularities of innervation. One of its chief advantages is that it is not necessary to withdraw the instrument in order to make applications, etc.—*Annales de Gynecol.*, July, 1883.

TREATMENT OF FRACTURE OF THE LARYNX.—DR. W. WAGNER, of Königshütte, points out (*Centralbl. f. Chir.*, No. 23, 1883) that fracture of the larynx is very rarely met with, and that not even the most experienced surgeons are in a position to derive from personal experience fixed rules for treating this injury. Most observers, however, agree that in such cases the first indication is the performing of tracheotomy in order to prevent suffocation. Occasionally, where there is much displacement of the fragments, it is advisable to perform thyrotomy.

A case is reported of multiple fracture of the larynx, which led the author to consider the subject of the treatment of this injury, and convinced him that further therapeutic measures were necessary beyond opening the trachea. The subject of this case was a robust and very powerful man, whose neck had been forcibly squeezed in a fight. He remained unconscious for about half an hour, and on recovering himself found that his breathing was very bad. On the following day, when the patient first came under the notice of Dr. Wagner, there was extreme dyspnœa; and, with coughing, much blood, partly fluid, partly coagulated, was brought up. The face, neck, and surface of the thorax were distended through emphysema. There was found to be free abnormal mobility of the left wing of the thyroid cartilage; and during the prompt performance of superior tracheotomy, the cricoid was found to be also fractured, and partly torn away from the upper ring of the trachea. The patient did well up to the third day after the date of operation, when signs were presented of hypostatic pneumonia on the left side, and there was a complaint of acute pain beneath the sternum. On the evening of the fourth day, there was free bleeding from the wound in the trachea, and on the following day the patient died. On post-mortem examination, there was found to have been mediastinal emphysema and suppurative mediastinitis. The lungs, with the exception of the lower lobe on the right side, appeared quite healthy.

Dr. Wagner thinks now that in any similar case of laryngeal injury, thyrotomy would be indicated, not so much for the purpose of replacing any fragments of cartilage, as for rendering the seat of fracture antiseptic, and for maintaining for a time this antiseptic condition. In a recent case of this kind, he would, after having plugged the trachea, incise the larynx in the middle line, and then separate the two wings of the thyroid cartilage so as to be able to see the whole of the interior of the larynx, and to apply some antiseptic fluid. He would then plug the interior of the larynx with small pieces of iodoform gauze. The wound would thus be rendered antiseptic, the fragments of broken cartilage be kept at rest, and the risk of hemorrhage be diminished. If there be no longer any danger of infection, a late thyrotomy, it is held, is still justifiable if performed with the view of putting displaced fragments of cartilage in a better position, and, if the thyroid cartilage be fractured, of uniting the alæ by silver suture. If the fragments of the thyroid cartilage cannot be thus united, or if stenosis cannot be prevented, Dr. Wagner would advocate extirpation of the partially detached portion of thyroid cartilage, and even removal of half the larynx. In a case reported by Billroth in which this partial operation had been performed, a good voice was retained, and, at all events, the patient is thus placed in a better position than that of having to go through life with a completely useless and much obstructed larynx.—*London Med. Record*, October 15, 1883.

TREATMENT OF PUERPERAL ECLAMPSIA.—DR. CAMILLO FUERST, assistant to Prof. Braun, communicates to the *Wien. med. Blätter* for July 26 some therapeutical notes from his obstetric clinic in Vienna. In the treatment of eclampsia, the following rules are observed: 1. For the prevention of fresh attacks, chloral-hydrate is given in the dose of 2 grammes (30 grains) by the rectum immediately after each fit, and if the greater part be returned, it may be repeated to the extent of 10 to 12 grammes (150 to 180 grains) in twenty-four hours. 2. If fits occur during the birth, it must be terminated artificially. 3. If the birth be over or not yet begun, diaphoresis is induced by hot baths, beginning at 38° to 40° C. (100.4° to 104° F.), and gradually raised by the addition of hot water to 42° or 45° C. (107.6° to 113° F.). After half an hour of this bath, or sooner, if much sweating of the face be induced, the patient is packed in warm flannels for two or three hours, from which she is freed gradually. This is repeated daily until the œdema disappears; and the treatment has been specially useful in eclampsia occurring during pregnancy.—*London Med. Record*, October 15, 1883.

PHOSPHATE OF CODEIN.—The *Wien. med. Blätter* of August 16th, contains the mention of a new drug, the phosphate of codein, which has been prepared by Merck, of Darmstadt, under the directions of Professor Hegar, of Freiburg. It is intended for hypodermic injection, for which neither the sulphate nor the chlorate are suitable, being nearly insoluble in water. The new salt is soluble in four parts of water, and contains seventy per cent. of codein. It crystallizes in four-sided columns, and is similar to morphia in action, with the advantage of having less tendency to excite toxic symptoms. It is peculiarly suitable for sensitive patients.—*London Med. Record*, October 15, 1883.

TREATMENT OF SYPHILIS IN INFANTS AT THE BREAST.—DR. FERDINAND LINK (*Prager Med. Wochensch.*, Aug. 8, 1883) reports four pretty severe syphilitic cases, in children aged, respectively, ten weeks, four months, eight days, and nine weeks. All were out-door patients, whose parents belonged to the working-classes.

Their symptoms were of the usual kind—eruptions on different parts, ulcers and rhagades of the nose and lips, troublesome coryza, etc. Two of the cases, moreover, presented serious complications, in the shape of intestinal catarrh and stomatitis.

The only internal remedy employed was iodide of potassium, two grains of which were given to each of the mothers daily, without interruption, during periods varying respectively from fourteen days to eight weeks.

In every instance a complete cure was indisputably effected—either by the time the medicine was discontinued, or very shortly afterwards—no traces of the disease being left beyond a more or less pronounced discoloration of the affected integument.

The apprehended effect of the iodide in lessening the secretion of milk was not perceptible in either of the four cases. If any slight diminution actually took place, it certainly did not interfere with the success of the treatment.—*Journal of Cutan. and Ven. Diseases*, November, 1883.

ERGOT IN ENTERIC FEVER.—DR. DUBOUÉ, of Pau, in a recently published essay (Paris, G. Masson, 1883), points out that the prominent symptom in enteric fever is enfeeblement of the muscular tissues. This enfeeblement is present in greater or less degree from the very commencement of the fever, and increases with the progress of the disease. It affects the muscles of the limbs, giving rise to the lassitude which is so marked a feature of this fever. It affects also the muscular fibres of the cardio-vascular system, and in this fact lies its great importance. The heart becomes enfeebled, and the blood current becomes retarded; and hence arises congestion of the various vital organs with its more or less serious consequences—imperfect oxygenation of the blood, defective nutritive power, and the like. This being so, the main indication in the treatment of enteric fever consists, according to the author, in combating the muscular enfeeblement and the consequent retardation of the blood current. The other important indication, viz., the prevention of nutritive disorders, can only be attained by giving attention primarily to the cardio-vascular debility.

For the fulfilment of this primary indication various therapeutic agents are useful, viz., the external or internal application of cold water, quinine, creasote, carbolic acid, the preparations of salicylic acid, ergot, etc., all of which act either directly or indirectly as excito-motors. While all of the agents enumerated are valuable for the end in view, the most valuable of all is ergot. Dr. Duboué has given this drug an extended trial, and the results he has attained have satisfied him of its extreme value. He has administered it with the happiest results in cases of enteric fever of the greatest gravity—in some even where the patient seemed *in extremis.* He believes that this remedy may cut short the fever even in its prodromal stage. Dr. Duboué insists on the necessity of the ergot being of good quality. If the drug be bad, as it too often is, it may give rise to sickness and other untoward symptoms; but if it be good no such symptoms occur, and the author has found that patients suffering from enteric fever, as a rule, show a remarkable tolerance of the pure drug. The mean dose used has been from one gramme and fifty centigrammes to three grammes (about twenty-three grains to forty-six grains) daily for an adult, and from forty centigrammes to one gramme (about six grains to fifteen and a half grains) for children between six and twelve. The dose must, however, be varied according to the circumstances of each case. The administration of the drug should, according to the advice of the author, be continued until convalescence has been well established.—*London Med. Record*, October 15, 1883.

Hydriodate of Hyoscin in Phthisis. — Dr. Fraentzel recommends (*Wein. med. Blätter*, July 5) hydriodate of hyoscin in the treatment of the night-sweating of phthisis, in subcutaneous doses of half a milligramme ($\frac{1}{110}$ gr.), or in pill, beginning with the same dose. He does not find it so universally beneficial as atropine, and it sooner exhibits a narcotic action; but he has seen good results from it in cases where atropine has proved useless, or has failed to act after being in use for some time.—*London Med. Record*, October 15, 1883.

Tetany.—At the meeting of the Medical Society of Vienna on May 25, Dr. N. Weiss communicated some interesting facts bearing on the nature of tetany. He had collected from German literature thirteen cases of tetany which had followed the operation for extirpation of a bronchocele. From the table which had been drawn up, it appeared that tetany had only been met with in cases of young women on whom total extirpation of the enlarged thyroid had been practised; that the nervous affection came on not later than ten days after the operation; that only eight of the cases showed signs of damage to the recurrent laryngeal nerve; and, finally, that five cases got well, seven died (two as a certain result of the tetany), and the remaining one still suffered from tetany three years after the operation. In three cases in which Dr. Weiss had the opportunity of performing a post-mortem examination, changes were detected in the gray matter of the anterior cornua of the cervical enlargement of the cord, and chiefly at the level of the fifth and sixth cervical nerves. The alterations observed were, briefly, swelling of the ganglion-cells, with lateral displacement of the nuclei, vacuolation of the cells, atrophy and shrinking of the protoplasm and cell processes. In the discussion which followed, Prof. Billroth contrasted and compared the characters of tetanus with those of tetany: he regarded the anatomical changes found microscopically in the gray matter of the cervical region of the spinal cord in tetany as probably of the nature of a direct continuation of the nutritional disturbance from the site of the operation. The proximity of the brain and spinal cord was an important factor, and it was not improbable that the neural changes occurred in all cases of removal of goitre, but it was suggested that they had to reach a certain degree of intensity before they could give rise to tetany. Prof. Rosenthal remarked that vacuolation could be by no means characteristic of tetany, seeing that vacuoles were described in connection with many nervous diseases.—*Wiener med. Woch.*, 22.—*Practitioner*, September, 1883.

The Mental State in Certain Diabetics.—There exist, in certain diabetics, moral troubles and intellectual peculiarities which enable the physician to diagnosticate the affection before there are other symptoms, and before the urine is examined. A young man becomes impotent, and tells it without shame, nor does he seem to regret it, but accepts the loss of his genital functions with resignation. This is significant, for hypochondriacal impotence is profoundly humiliating, and the person consults the physician several times a week; the diabetic on the contrary manifests, under these circumstances, a sort of indifference and relative optimism. At a more advanced period of the disease, when there is a greater quantity of sugar, the mental state of the diabetic undergoes modifications. He becomes melancholy, reserved, dejected, and speaks but little; he has parsimonious tendencies which become more developed day by day.

A man of the age of forty years, who, without appreciable cause and presenting no other mental trouble, becomes avaricious and thinks himself ruined, is very likely a diabetic. At a still more advanced stage of the disease when the pathological process has gone on for a considerable time, the diagnosis may still be made from the mental symptoms. The patient is lazy, continually wishes to rest, and is profoundly apathetic. Finally he falls into a state bordering on marasmus, and dies as frequently from some complication as from the disease itself.—*L'Abeille Médicale*, September 10, 1883.

Absorption of Fat in the Small Intestine.—M. Zawarykin has recently been making experiments with a view to determining the question as to the digestion and absorption of fatty substances by the villi of the small intestine. From these experiments he concludes that there are lymphatic cellules of the solitary follicular glands of the intestine, which, traversing the epithelial cells, seize upon the globules of fat and, passing them into the blood or chyle vessels, return charged with fat, bringing back also the fat from the intestine into the general circulation. These changes may be seen by examining the intestinal villosities at different periods of digestion. If the examiner causes osmic acid to act on the preparation, he will see that certain lymphatic cells, placed between the epithelial cells of the villus, contain fat. Some of them contain fat only in one part of their protoplasmic substance. Then, in other preparations one may see the fatty lymphatic cells accumulated between the subvillous connective tissue and the villus itself. M. Zawarykin also states that the lymphatic cells, by their amœboid movement, cause the fat to pass into the intestine, thence to be carried into the general circulation. This hypothesis is very seducing, but needs supplementary proof in order to be adopted. — *Revue Scientifique*, Oct. 13, 1883.

Labferment—Rennet-ferment. — Baginsky has been recently studying the subject of ferments, and particularly one which he calls Labferment (rennet-ferment). He finds this ferment in the juice of certain vegetables, as has been stated by Würtz, in artichoke flowers, in fig-juice, and in the aqueous extract of the Carica papaya. This last is the most active.

The small intestine of the calf seems to contain a ferment. If a small quantity of the intestinal mucous membrane be digested in the presence of hydrochloric acid, and the liquor then filtered and neutralized, a few drops of it will almost instantly coagulate milk. The hydrochloric extract seems to be more active than the alkaline extract. The best temperature for the action of this ferment seems to be between 35° and 50° C.

Putrefaction does not seem to alter the ferment so as to cause it to become ammoniacal or strongly alkaline. Trypsin appears to destroy the ferment rapidly; but, contrary to the opinion of Roberts, there is none of this ferment in pancreatic juice.—*Revue Scientifique*, October 13, 1883.

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THE TOXIC EFFECTS OF JEQUIRITY.

Now that so much is said on all sides in regard to the effects of jequirity in the treatment of trachoma, as demonstrated first by Wecker, it is desirable to know something of its action when introduced into the system. This important investigation has been made by MM. Cornil and Berlioz, and their paper, giving an account of their studies, was presented to the Académie des Sciences in September last.

The effects of jequirity depend on the presence of an organism—a microbe or bacterium. This organism excites a local inflammation of considerable violence, due, doubtless, to its growth and development in the tissue to which it is applied. Jequirity also contains a crystallizable principle, but this appears to be devoid of toxic activity, since it produced no appreciable result when administered to animals. That the bacteria constitute the active agent, was proved by filtration of the infusion by the method of Gautier, for then it is found no longer to excite the active inflammation and the systemic disturbance produced by the unfiltered preparation.

For the purpose of the inquiry undertaken by them, MM. Cornil and Berlioz operated with an infusion of jequirity so prepared and preserved in flasks as to prevent the admission of germs from the air in the usual mode of preparing infusions for such purposes. It preserved its activity for several weeks. In the first series of experiments, they injected the infusion into the subcutaneous connective tissue of rabbits and guinea pigs. All died within thirty-six to sixty hours, having œdema of the skin, bacteria in the peritoneal cavity with slight peritonitis, ecchymoses of the stomachal mucous membrane, and very considerable tumefaction of Peyer's patches. In these animals, however, such a state of these glands, similar to that of human typhoid, occurs in many infectious diseases.

In another series of experiments, the same infusion injected into the peritoneal and pleural cavities caused death in from twenty-four to forty-eight hours. Intense inflammation of the serous membranes was produced, and the fluid in these cavities was cloudy, filled with pus globules, with bacteria in the form of rods and spores, and shreds of false membrane, free and attached. The lymphatic glands and Peyer's patches were usually tumefied, and the lungs on the side corresponding to that in which the injection was made presented points of congestion and broncho-pneumonia. Besides these lesions, in many of the autopsies made, the liver presented on the surface yellowish-gray patches, and, on section, the same color with a certain amount of opacity. This appearance was found to be due to the presence of the rod-shaped organisms of jequirity.

Sections of these made after hardening in alcohol, and colored with methyl-violet, and examined with Verick's immersion No. 10, exhibited the following characters:

At the periphery of some of the hepatic lobules, an interlobular branch of the vena porta is filled by a fibrinous clot containing in its meshes numerous bacilli characteristic of jequirity. A similar thrombus may stop the circulation in a part of a hepatic lobule, and in some of the patches a portion of the interlobular capillaries contains either the bacilli in small numbers, with red and white blood corpuscles, or aggregations of bacilli, either as rods or as spores. The white corpuscles may be more or less altered—atrophied—and their protoplasm no longer visible. The hepatic cells in the yellowish-gray patches are pale; their nuclei altered in color or absent, and without actual fatty degeneration there exist, in the atrophied cells, pigment granules.

Frogs injected with an infusion of jequirity, either in the dorsal lymph-sac or in the peritoneum, die in twenty-four to forty-eight hours, presenting in the blood, connective tissue, and peritoneum notable quantities of bacteria.

These researches, as well as the clinical observations made by various ophthalmologists, indicate the remarkable powers of jequirity. In trachoma, as in the other chronic ophthalmic disorders for which this agent has been used, the therapeutical results are due to the predominating action of the remedy, and the substitution of the morbid process caused by it for the original affection.

The question of safety must not be overlooked.

Is there danger, under some circumstances, that the bacteria of jequirity enter the organism, and multiply in sufficient numbers to cause a septic state?

OVARIOTOMY AND HYSTERECTOMY IN THE ROYAL INFIRMARY OF EDINBURGH.

DURING the three years ending on the last day of May, 1883, as we learn from the *Edinburgh Medical Journal*, for September and October, sixty-eight ordinary ovariotomies, ten hysterectomies for fibrous tumors, and one hysterectomy and double ovariotomy have been performed in the new Infirmary of Edinburgh, with a degree of success which, when the magnitude of some of the operations is considered, is simply marvellous. Of the 68 ordinary ovarian cases, 15, or 22 per cent., were free from adhesions, while 53, or 78 per cent., were more or less freely attached. 30 of the cases had been tapped from one to nine times before operation. Both ovaries were removed 8 times. In all the cases of hysterectomy, the ovaries were taken away, and they were enlarged or diseased in every instance.

In the simple ovariotomies, the pedicle was invariably dropped into the pelvis. The cautery was used fifty-five times for dividing the pedicle, the time required for that object having varied from five to eight minutes. The ligature was used only when the pedicle was very thin, or in those cases in which the tumor had to be enucleated from one or both broad ligaments. The extraperitoneal method was employed in all of the hysterectomies, with one exception. In the case of combined hysterectomy and double ovariotomy, the adhesions were universal, and ligatures and the clamp were resorted to.

Of the 79 cases, only 5 died. Of the 68 ordinary ovarian cases, 4 perished, one of rapid septicæmia and two of supposed carbolic acid intoxication, the cause being obscure in the fourth. All of the 8 double ovariotomies recovered. The 10 cases of hysterectomy for very large or bleeding fibroids, despite the fact that the operations were of the most severe kind, and that the weight of the tumors averaged over twenty pounds, were successful. The double hysterectomy and ovariotomy proved fatal.

The mortality appeared to be influenced by the use of the spray, which, as is well known, Mr. Keith has now abandoned. Thus, of 25 ovariotomies and hysterectomies, including the combined extirpation of the uterus and the ovaries, conducted under the spray, 4, or 16 per cent., died, while of 54 ovariotomies and hysterectomies without the spray, only 1, or 1.8 per cent., perished.

Of the 68 ovarian tumors, 2 were dermoid, 2 suppurating cysts, 1 was sarcomatous, 1 malignant, 1 solid, and 1 a gangrenous cyst, the remainder having been ordinary cysts.

In addition to the foregoing laparotomies, the uterus was twice successfully removed by the vagina, once for epithelioma, and once for inversion with a fibrous tumor embedded in its walls. The ovaries and tubes were removed twice, with one death, the operation having been performed under the carbolic spray; and a tubo-interstitial pregnancy was prevented from doing harm by abdominal section.

While the results of the ovariotomies were most brilliant, those of the more serious and more formidable operation of removal of the uterus are unequalled. The truth of this statement will become the more apparent upon comparing the successes here recorded with the results obtained by another accomplished surgeon. In a paper on the operative treatment of uterine fibromyomata, read at the recent meeting of the British Medical Association, and published in the *British Medical Journal*, for October 13th, Mr. KNOWSLEY THORNTON states that he has performed supravaginal hysterectomy 12 times with 5 deaths; and he attributes the large mortality to the fact that in the majority of these operations it is impossible to carry out strict antiseptic or aseptic surgery. We believe, however, that this opinion is erroneous. The hysterectomies of Keith were done without Listerism; those of Thornton with antiseptic precautions. The former saved all of his ten cases; the latter lost 41.66 per cent. of his patients. In nine of Keith's cases, the stump was treated extraperitoneally, and all of Thornton's managed in the same way recovered. Hence, we have a perfect right to assume that the extraperitoneal method of treating the stump, through which sepsis and hemorrhage are prevented, and not Listerism, is the true cause of Keith's successes; and we doubt not that if dropping of the pedicle be abandoned, future experience will show a much smaller death-rate than has hitherto attended the procedure.

THE PHYSIOLOGICAL ACTIONS OF IODOFORM.

As iodoform is now so largely employed in surgical practice, our readers will, doubtless, be interested in the elaborate study of its physiological effects conducted by DR. RUMMO, of Naples, in Vulpian's laboratory. The experiments were made on frogs, rabbits, Guinea pigs, and dogs, and the observations included the functions of circulation, of calorification, of respiration, of nutrition, and of the nervous system. It would be quite impracticable, in the space at our disposal, to do more than analyze the conclusions with which the paper ends.

Iodoform depresses the cardiac functions and slows the movements by lengthening the systolic contraction, and by prolonging the diastole, so that the sphygmographic tracing bears some resemblance to that made under veratrine. Atropine does not affect the slowing of the heart caused by iodoform, but destruction of the medulla oblongata in the frog prevents this effect. Dilatation of the capillaries of the interdigital membrane first ensues, but a progressive contraction succeeds.

The respiratory movements are correspondingly affected. With large doses the respiration is at first accelerated, but afterwards slowed. The blood pressure falls with the diminution in the number of cardiac pulsations. In the dog, small doses of iodoform do not affect the temperature; medium doses raise the body-heat, but large doses cause a considerable decline.

Iodoform acts especially on the nervous centres, depressing the functions of the anatomical elements, but as the action continues, the peripheral nerves are at length affected, and finally the muscles. Motility is first impaired, then lost; sensibility declines somewhat, and the reflexes become less active.

Iodoform in the beginning of its action increases the secretions in general, and notably the salivary, the biliary, and gastro-intestinal. It is in part eliminated by the secretory organs, probably in part as an alkaline iodide (iodide of sodium?) and a small quantity passes out unchanged by the respiratory organs. Some small portion escapes by the urine, not enough, however, to explain the albuminuria and hæmaturia which result from the administration of large doses. The elimination begins in an hour after its ingestion, but it may be recognized in the urine, three days afterward.

Various morbid changes are found, the most important being a fatty degeneration of the organs, especially of the liver, a glomerulo-nephritis, and an acute anterior poliomyelitis. In these anatomical alterations, we recognize the community of effects produced by the mineral remedies. The most important practical point, however, is the action of iodoform on the bacteria of disease. It has a more decided germicide action than on the multiplication of spores. Iodoform dissolved in turpentine kills microbes in active reproduction—a practical fact which might be advantageously applied in surgical practice.

FAT CRYSTALS IN STOOLS IN CANCER OF THE PANCREAS.

It is well known that more or less fatty stools frequently attend serious disease of the pancreas, and are often of diagnostic value. Dr. Franz Ziehl has, however, recently reported a case in the *Deutsche medizinische Wochenschrift* for Sept. 12th, in which the microscope showed that three-fourths of the stool-mass, which was of a silver-gray color, was composed of fat crystals. These were needle-shaped, partly isolated and partly in bundles. They were soluble in ether, and there remained after evaporating the ethereal solution an abundant fatty residue, out of which again crystallized a moderate number of spherical crystals, which reacted in the usual manner with osmic acid. The autopsy revealed primary cancer of the pancreas, with secondary cancer of the duodenum and stomach; ulceration of the latter with compression of the ductus choledochus and ductus hepaticus. There was general icterus.

Friedreich has described in Ziemssen's *Cyclopedia* two cases in which were the same silver-gray stools, and in which the microscope discovered crystalline fat. The important practical deduction to be made from these observations, is that we should not be satisfied with a simple ocular inspection of the stools in suspected pancreatic disease, since this crystalline fat may be present in large quantities, and give no distinctive features to the stools, while the microscope will readily discover the crystals.

It will be remembered that the ordinary macroscopic characters of fatty stools are at times a simple milkiness, at others the presence of greasy or butter-like, pale-yellow, and whitish masses of the size of a pea or larger, mixed with fecal matter. Or there may be, upon cooling, a pellicle of stiffened fat at the edge of the chamber vessel or surrounding the masses of fecal matter. In other cases still, there may be a fluid more closely resembling oil.

It is important to observe, also, that in all three of the cases referred to, there was jaundice due to obstruction of the hepatic duct. Alongside of this fact should be placed an announcement by Gerhardt, that in the pale, uncolored stools of a case of icterus were found large numbers of fat crystals. So soon as the stools again resumed their natural color by the admixture of bile, the crystals disappeared. From these facts the inference is legitimate, that it is the coincident absence of bile which causes the fat to assume the crystalline rather than the amorphous shape.

THE INDEX CATALOGUE

We are receiving, from physicians who have purchased from the Public Printer the first three volumes of the Index Catalogue of the Library of the Surgeon-General's Office, complaints that they cannot obtain Vol. IV. in like manner, and therefore find it impossible to complete their sets.

It appears that of the first three volumes the Public Printer struck off a sufficient number of copies to supply the demand, selling them at two dollars per volume. When Volume IV. was ready for the press, he decided that he had no authority to strike off extra copies for sale unless such copies were ordered *before* he began to print. This decision is in accordance with the letter of the law, which is as follows:

"If any person desiring extra copies of any document printed at the Government Printing Office by authority of law shall, previous to its being put to press, notify the Congressional Printer of the number of copies wanted, and shall pay to him, in advance, the estimated cost thereof, and ten per centum thereon, the Congressional Printer may, under the direction of the Joint Committee on Public Printing, furnish the same." (*Revised Statutes*, 1875. Sec. 3809.)

We should certainly have supposed that there could be no objection, in regard to a series of volumes like those of the Catalogue, to considering an order for the first volume as equivalent to an order for the whole work, but the Public Printer has decided otherwise. Under these circumstances, what is to be done? The very limited number of copies (1500) printed for distribution by the Surgeon-General is quite insufficient to supply the demand, and of course no copies of Vol. IV. can be spared, since they are all required to complete the sets of those institutions which have received the previous volumes from this source. Fortunately, Vol. IV. has been stereotyped, so that extra copies can be printed at comparatively small cost, if Congress so directs. It appears to us, therefore, that the members of the profession in this country should request of Congress the passage of a joint resolution authorizing and directing the Public Printer to print a sufficient number of Vol. IV. and of all succeeding volumes of the Index Catalogue to meet all probable demands for purchase. This request should be urged both upon individual members and Senators by personal interviews or letters from their medical friends, and also by formal memorials from societies, addressed to Congress as a body.

Meanwhile, we understand that the first part of the manuscript for Vol. V. is about to be sent to the Public Printer, and it will probably be judicious for those who wish to purchase copies of it to send in their orders within the next month or two.

AEROTHERAPY.

Amongst the novelties in therapeutics recently brought forward, is the application of compressed air in the form of a douche directed against some part of the body. The inhalation of compressed air is by no means a new expedient, but in the method proposed by Dr. Dupont (*Bulletin Général de Thérapeutique*, Sept. 30, 1883) a novel application is made of a well-known remedial measure.

For the air-douche, the compression of the air is carried to three atmospheres. A flexible tube connected with the gasometer and having attached, at its free extremity, a canula with an orifice of 8 to 10 millimetres in size, is the simple apparatus required. The jet of compressed air is directed against the surface, wholly bared, the patient lying recumbent. The effects are partly mechanical; partly dynamical. By the attrition of compressed air, percussion is made, the superficial tissues are forced to glide over those beneath, and the blood is displaced and turned in from the more superficial to the deeper vessels. Considerable cooling of the surface, followed by reaction which quickly reddens the skin, are the chief dynamical local effects. The sensations experienced by the patient are of an agreeable character—there is a general sense of well-being, combined with a warm glow of the whole surface.

The air-douche is recommended for the following conditions: For consumption, chlorosis, anæmia, obesity, and allied affections, with a view to increase the activity of the nutritive functions. In œdema, hydrarthrosis, ankylosis, and analagous diseases, to increase the circulation and promote absorption of effused fluids. In hysterical contractures, hyperæsthesia, and painful local muscular spasm.

With compressed air may be mixed carbonic acid gas to obtain the local anodyne effects of the latter, or anæsthetic or anodyne liquids to effect at the same time the results of pulverization of fluids. Apart from such adjuvant effects, the application of the compressed air-douche must be regarded as an efficient mode of massage.

THE RESULTS OF THE GERMAN CHOLERA COMMISSION.

No official report of the results of the investigations made in Egypt by the German Cholera Commission, under the direction of Dr. Koch, has, as yet, been made. But it is announced, that in addition to numerous micro-organisms found in the cholera dejecta, which seem to have no relation to the disease, a special form of bacillus has been found in the walls of the intestine which corresponds in size and shape more closely with the bacillus of glanders than with any other bacillus.

Further investigation and experimentation in Egypt having been rendered impossible by the disappearance of the disease, Koch asked permission to extend the labors of the Commission into India. The request has been granted, and we may expect soon to learn more concerning this special bacillus.

The report of Acting Assistant Surgeon Main, published in another column, shows what might be an alarming condition of affairs in Mexico, were it earlier in the season, but, as cold weather will soon be upon us, no apprehension of further spread of yellow fever into the United States need now be felt.

REVIEWS.

The Roller-bandage. By William Barton Hopkins, Assistant Demonstrator of Surgery in the University of Pennsylvania, etc. 12mo. pp. 95. Philadelphia: J. B. Lippincott & Co., 1883.

This little work begins with a description of the roller-bandage, and gives some concise and definite information respecting its material and manufacture, and also the general methods of its application. The different bandages in general use are then described, and illustrated by drawings taken from photographs, the same bandage, in many cases, being shown at different stages of its application. By this means, a very original set of drawings has been produced, which, if carefully studied, will give the reader the essential points in the application of the various bandages. The drawings are certainly more accurate than the stereotyped plates generally seen in works of this nature; but their execution is so bad that they do much to mar the general appearance of the work, which in other respects is very satisfactory. The author's modification of the third roller of Desault (Fig. 33) presents, so far as we can see, no advantages over the original.

The directions for the application of the bandages are clearly and carefully given, and we do not doubt that the work will be of great service to students who desire to make themselves familiar with this most important class of surgical dressings.

SOCIETY PROCEEDINGS.

CINCINNATI ACADEMY OF MEDICINE.

Stated Meeting, October 22, 1883.

The President, W. W. Seely, M.D., in the Chair.

THE TREATMENT OF EMPYEMA BY PLEURAL INCISION; OPERATION ON THE SEVENTEENTH DAY; REPORT OF CASES.

The discussion on this subject was opened by Dr. Joseph Ransohoff, who reported three cases, in two of which he had operated successfully.

The first case was a youth aged twenty years, the son of healthy parents, in whom, after five days' illness with symptoms indicative of acute lobar pneumonia, including bronchial breathing, increased vocal fremitus, an acute onset, and a percussion note not absolutely flat, a pleuritic effusion developed. During the two weeks that followed, the condition was unchanged. Then, however, symptoms of a graver character set in. The purulent character of the exudation was demonstrated by the hypodermic syringe, and on the seventeenth day of the disease an incision three inches in length was made in the seventh intercostal space, midway between the external margin of the scapula and the axillary line. Nearly two pints of creamy pus flowed from the wound. Permanent irrigation with borated water was at once established by means of a double siphon, and continued for six hours. Then the tubes were cut three inches from the wound, and iodoform dressing applied. During several succeeding days, the patient suffered from severe pain and a most persistent cough, unaffected by morphia, and alleviated only by the irrigation. The tubes were removed, and all pain and cough ceased, showing that these symptoms had been due to pleural irritation by the tubes. The cavity was now irrigated daily until the water came away at each time free from pus, and the iodoform dressing was reapplied. Two complications, however, arose: On the fourth day erysipelas developed and travelled down the back to the nates. Incisions had to be made to evacuate accumulations of pus, and these were followed by fistulous openings or gangrenous sloughs. The second complication was iodoform poisoning, in the form of nocturnal maniacal attacks. These subsided promptly upon the substitution of boracic acid for the iodoform dressing. Notwithstanding all this the recovery was rapid and complete, the opening into the pleural cavity being entirely closed at the fourth week.

The second case was that of W. B., æt. 26, whose father died of heart disease, and his mother of pulmonary hemorrhage. On the 19th of March he was prostrated by a chill, followed by symptoms recognized by his physicians as those of pleurisy with effusion into the right side. Two weeks before admission to the Good Samaritan Hospital he had another rigor followed by sharp fever. When admitted early in May, owing to the urgency of the case, Dr. Whittaker, whose patient he was, removed about a pint of purulent fluid, when the needle became blocked up. The case was operated upon and treated in the same manner as the previous one, and in one month there remained only a small fistulous opening, which in another month had entirely closed.

The third case was less fortunate. The patient was suffering from phthisis, and had an enormous effusion on the left side, displacing the heart to the right of the sternum. Aspiration, removing fifty ounces of serous fluid, the last of which was turbid, gave but slight temporary relief, and was followed on the third day by pneumothorax; ascites developed. Tapping had to be resorted to every two or three weeks during the next five months. During this time, however, the fistulous opening in the lung closed. The pleural cavity was opened and the case was conducted as the two previous; but little effect was produced. The heart remained fixed in its abnormal position; the cough and dyspnœa persisted and the patient died on the fifth day of exhaustion.

From these and other cases within his experience, the speaker drew the following conclusions: Leaving out of consideration the empyemata of children, in whom the immunity from firm adhesions and the elasticity of the chest-walls are accountable for the good results, aspiration of purulent accumulations is rarely followed by permanent benefit. Aspiration is sometimes attended by danger, and deaths have followed it, even where the effusion was serous.

The presence of a tubercular basis for the empyema should not deter one from incising the pleura, unless both lungs are seriously implicated.

The principles on which pleural incision is performed and drainage obtained are analogous to those which guide us in dealing with a diseased joint. König, Bull, and the most recent French authority, M. Hache, do not consider the presence of phthisis a contraindication to the operation.

The speaker had been unable to find a case reported in which the operation was performed so early as the seventeenth day, as in the first of his cases. But the speedy recovery which followed this operation he believed was sufficient evidence of the propriety of early operative procedure.

The objects to be sought in all the operations that have been proposed are:

1. The free evacuation of the pus that is present, and a ready exit for that which is to be formed.

2. An opportunity for the expansion of the lung, and a total agglutination of pulmonary and parietal layers of the pleura. In recent empyema, a simple incision of the pleura is all that is required to insure the first object. The incision must be made on the dorsal side

of the axillary line, and not lower than the sixth or seventh intercostal space.

With regard to the after-treatment, if provision is made for the ready exit of the pus as quickly as it is formed, it is unimportant whether the pleural cavity be irrigated more than once, and that immediately after the operation, as König advises. One of the most successful operators, Dr. John G. Blake, of Boston, believes that injections are not at all required when the pus is perfectly pure. It is better, however, to irrigate often, in order to remove all pus and shreds of adventitious membrane. Carbolic acid solutions should not be employed, because of their toxic effects.

The second requisite is best secured by the early operation. If patients are not benefited by the incision, and if fistulous tracts remain, it is because the operation was too long delayed. When such fistulous openings remain, they are to be considered as indications of a permanently retracted condition of the lung, and nothing remains to be done but to assist Nature in adapting the chest-wall to the form of the retracted viscus by an extensive resection of several ribs.

DR. JONES reported a case in which pleuritic effusion supervened upon pneumonia in a youth of seventeen years. Three pints of serous fluid were removed by the aspirator, and relief was afforded for a few weeks. Three months later, however, the symptoms became so alarming that an incision was made in a manner similar to that reported by Dr. Ransohoff. Several relapses occurred, but the patient has improved greatly, and is now (five months after) apparently almost well.

DR. J. S. KROUSE reported the case of a man who had a pleuritic effusion into the right pleural sac, resulting from a fracture of the seventh rib. A quart of straw-colored fluid was drawn off by aspiration, and a speedy recovery ensued.

DR. J. T. WHITTAKER reported two additional cases similar to those of Dr. Ransohoff, which were operated upon by Dr. P. S. Conner, not present. In one of them the speaker had used the aspirator one night when the dyspnœa was so great as to demand immediate relief. The other had been previously operated upon. Both recovered. This operation, he said, really marks an epoch in the treatment of this disease. A few years ago it was customary to attempt relief only by aspiration. Cases were allowed to die from want of surgical treatment. He himself had had cases die, years ago, from amyloid disease, the result of an empyema. This is, however, by no means a new operation, as we have evidence that Hippocrates opened the pleural cavity and evacuated pus. It is strange that an operation attended by such remarkable results could have fallen later into such disrepute that some of the great surgeons of the time discountenanced it. Dupuytren discarded it, saying of it that he had rather die by the hand of God than by the hand of man. In our day the result is entirely different. Fatal cases uncomplicated by phthisis are exceedingly rare. The cases of idiopathic empyema, so called, form the great minority of cases. It is stated that ninety out of one hundred and twenty-one cases were phthisical; many of them afterwards died of phthisis. It is questionable whether a serous effusion into the pleural cavity ever goes on to the formation of pus without a background of pneumonia or tuberculosis. In still more advanced cases of tuberculosis, the individual has an effusion, not of serum or of pus, but of blood. The operation in one case of Dr. Ransohoff was notable for having been performed so early, but the belief now is in favor of early operation. "*Ubi pus, ibi incisio*," should prevail here as elsewhere.

The speaker was decidedly in favor of frequent irrigation of the pleural cavity after incision, and believed that the great cause for the operation having ever fallen into disrepute was the failure on the part of operators to carry out with sufficient zeal this after-treatment.

The speaker referred also to the value of examining the pleural or abscess sac with the finger to ascertain the condition of its walls. In old cases, with stiff walls, irrigation is an absolute necessity to remove the disintegrating fragments of tissue from the sac, and in very old cases it is advisable to use a sharp spoon or curette to secure their detachment. Experience has shown that this procedure is entirely unattended by danger, as from hemorrhage or otherwise. To secure easy adaptation of the pulmonary and parietal pleuræ, it may be necessary in very chronic cases to cut the ribs in two places, as recommended by Roser, or even to exsect the anterior thoracic wall, including the parietal pleura, and adapt the skin to the pulmonary pleura, as practised by Scheder. Early operations remove the necessity of such radical procedures, and are attended with much speedier obliteration of the pleural sac. In the speaker's opinion, the case should be put not only "where there is pus, there should be incision," but, also, "when there is pus, there should be incision."

DR. E. W. MITCHELL reported a case in which he had performed the operation, but without good result, the patient dying within a month afterwards. He attributed the result, however, to the impoverished condition of the patient, owing to intemperate habits, bad hygienic surroundings, and the impossibility of having the after-treatment well carried out.

DR. A. RAVOGLI spoke of the favorable results following aspiration as he had seen it performed in the hospitals of Rome. He also placed considerable importance on the method of Barelli for differentiating between serous and purulent effusions, by means of changes in the vocal resonance.

DR. S. NICKLES objected to the view that aspiration could be relied upon for cure, even in simple cases with serous effusion. He had seen fatal cases where the exudation was serous from first to last. Again, the diagnostic signs referred to by Dr. Ravogli are not to be relied upon. Where the symptoms are severe from the start, and especially when following an acute disease like scarlet fever, the probabilities are that the exudation will be purulent.

In a case of empyema following scarlatina, the speaker made a very free incision, introduced a tube and in a few weeks recovery was complete. In another case, a number of years ago, he was undecided as to the character of the fluid until hectic fever appeared, it not being the custom to make an exploratory puncture in those days. Then he made an incision, and the case recovered without washing out the cavity. He does not think irrigation essential, but it may hasten the recovery. It is questionable whether serous fluid should be removed early, unless it is so great in quantity as to cause alarming dyspnœa.

DR. J. S. CLEVELAND spoke of the cases he had seen in hospital practice, in which the incision was made by means of the trocar. The results were very fatal. In one case where a permanent fistula followed the puncture, recovery occurred, but no lesson was drawn from it.

DR. W. H. WENNING reported the case of a young man (æt. 23) belonging to a tuberculous family, in whom aspiration relieved a serous effusion for six months. Then the procedure had to be repeated, and the fluid was decidedly purulent. During the six months that have elapsed since the second aspiration there has been no return of the trouble.

DR. RANSOHOFF, in closing the discussion, agreed with the speakers who opposed the view that single aspiration is sufficient for a cure in cases of serous exudation. In his own experience it almost never proved successful. Again, it is not without danger, for pneumothorax not infrequently follows it. He does not consider Barelli's sign of any value. It is very strange that Billroth should say that no benefit has been derived from this operation. The character of the operation should be determined by the length of time that the case has existed and the degree of thickening that has occurred in the pleura. In old cases with very thick pleura, it is useless to trust to simple incision. It is then sometimes necessary to remove a rib or two, as König has recommended; but it is better not to trephine, as Langenbeck advises. The large opening made by the removal of several ribs becomes necessary in severe cases, in order that a portion of the thickened pleura may be removed with the sharp spoon.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Thursday Evening, Sept. 27, 1883.

THE PRESIDENT, JAMES TYSON, M.D., IN THE CHAIR.

DR. SEILER presented a specimen of

POSTERIOR NASAL HYPERTROPHY IN SITU, TOGETHER WITH AN EXOSTOSIS FROM THE VOMER.

The anatomical relation of the parts on the right side of the nasal cavity was perfectly normal.

When, however, this partition was removed, a very marked enlargement of the posterior end of the lower turbinated bone on the left side was noticed, which proved to be a posterior hypertrophy.

On the left surface of the vomer a projection was also seen, which proved to be an exostosis, the existence of which, in nasal disease, is denied by some authors. The tumor-like projection into the nasal cavity consists of a hypertrophy of the erectile tissue underlying the nasal mucous membrane.

Its presence is due to a long-continued catarrhal inflammation which, by the infiltration of its inflammatory products into this cavernous tissue has distended the venous sinuses, and has increased the thickness of the connective-tissue walls of the caverns, so that when they are empty of blood a perceptible swelling or tumor still remains, as is seen in the specimen.

The reason why these hypertrophies occur more frequently at the anterior or posterior ends of the lower turbinated bones, must be looked for in the fact that the blood, favored by gravitation, distends the caverns of the erectile tissue more easily under the excitement of local irritation in these localities, and that the anterior as well as the posterior ends of the lower turbinated bones, forming the entrance to the in- or outgoing air current, are more liable to irritation by irritants contained in the respired air than any other portion of the nasal cavity.

DR. O'HARA asked what was the pathological condition generally found in hay fever, and was it due to a local nasal condition or to some constitutional influence.

DR. SEILER said that, of late, great interest had been taken in the pathology of hay fever, particularly in its relation to the pathological condition of the nasal cavities, and that great success had attended certain methods of treatment. In hay fever there is general hypertrophy of the mucous membrane of all the turbinated bones and septum nasi. The membrane is thickened and puffed up, thus occluding the nasal cavities. The inhalation of impure air, dust, etc., will produce irritation and cause asthmatic attacks. The pressure exerted by foreign growths or hypertrophied normal tissue in the nares also causes asthmatic symptoms.

As regards the possibility of cure, we may say that all sufferers from hay fever invariably have hypertrophic nasal catarrh, and if you, during the winter, remove the hypertrophied tissue the hay fever will not return during the summer. This removal is done either with a dentaldrill or the cautery knife.

He did not believe it to be due to rotten grains, as the worst cases occur in travelling, from coal-dust, etc. The disease is due chiefly to the hypertrophies. Sometimes the attack comes on frequently, and lasts only a very short time, the patient in the mean time being well. He had seen a number of such cases. In one case a young lady was attacked at every menstrual period, the disease lasting a half-hour. There was every symptom present: sneezing, watering of the eyes, running and clogging up of nose, difficulty in breathing, etc. In another instance, a gentleman had the same kind of seizures, but they were accompanied with intense pain in the nose. By surgical means, he succeeded in relieving him very much. Instead of one attack in three or four days, he has had but one in four months. These cases show how localized hypertrophies can produce spasmodic attacks.

DR. MUSSER asked if obstruction of anterior nares would give rise to as marked symptoms as if the disease was localized further back. He has a case of exostosis of one side which has given rise to no special spasmodic symptoms as yet.

DR. SEILER said that the anterior end of the nares is not at all sensitive, and the septum of the nose may be deflected at this point without producing symptoms other than those caused by the occlusion of the cavity. The middle and posterior parts are very sensitive. This can readily be demonstrated by the passage of a probe. Where there are marked spasmodic symptoms the middle and posterior tracts will usually be found to be affected.

DR. J. T. ESKRIDGE presented specimens of

MALIGNANT GROWTHS OF THE STOMACH AND OVARIES,

with the following history:

Mrs. A., æt. 32 years, married, born in Germany, had done hard service-work all her life. She had had two children, both living and healthy, three and two years old respectively. Her husband was a drunken, dissipated fellow. Her children were born at term. Neither she nor they presented any evidence of syphilis. She had had no abortions. Her confinements had been normal. After the first she remained in bed ten days, but after the last only five, as she was compelled to go out washing to earn bread for herself and children. Until her last confinement she had always felt well, and weighed, two years ago, one hundred and forty pounds; but soon after the birth of the child she began to lose flesh and strength. So far as she knew, none of her relatives had suffered from cancer or tuberculosis. In the latter part of the year 1882, she fell on her stomach and hurt herself considerably. Soon after the accident her abdomen became painful and began to swell. In March, 1883, she was admitted to the Episcopal Hospital. She remained in that hospital several weeks, and during her stay there her abdomen was twice tapped, a large quantity of a straw-colored serous fluid having been drawn off each time. She entered the Hospital of the Jefferson Medical College, very much emaciated, July 1, 1883. Dr. Getchell twice drew off large quantities of fluid similar in appearance to that obtained from her while she was in the Episcopal Hospital. She came under my care July 17th. She was very weak, and her appetite was poor, but her stomach was tolerant, and had been so during her entire illness. Her abdomen was greatly distended, and slightly painful to palpation. No nodules could be felt in any portion of the abdominal cavity. No heart or lung trouble was detected. The urine was normal in appearance and quantity. The temperature over the abdomen was a little higher than in the axillæ, in each of which it was 99.4°. A few days later, about three gallons of a yellowish serous fluid were drawn from the abdominal cavity. After the operation the abdomen was flaccid and tolerant of manipulation. A tumor just below the ensiform cartilage of the sternum was felt. It was thought to be connected with the stomach. A tumor, much larger on the right side than on the left, was observed in each ovarian region. The liver and spleen presented, so far as I was able to detect, no evidence of disease in these organs. Occasionally she was troubled by diarrhœa. She grew weaker, and her abdomen more tender. She died from asthenia, August 1, 1883. Her stomach remained tolerant to the last. From July 27th to August 1st, her temperature ranged from 100.4° to 102°. She was treated mainly with anodyne and supportive measures. Anti-syphilitic treatment was at one time employed, but without any improvement.

Sectio Cadaveris (twenty-one hours after death).—Body greatly emaciated, the adipose tissue being almost completely absorbed. Parietal layer of peritoneum thickened, opaque, and quite firmly attached to abdominal muscles. Its internal surface is very rough, and presents a rugose appearance almost as well-marked as the mucous membrane of a healthy stomach. The rugosed surface is made up of layers of firmly adherent lymph, and is studded throughout with deposits of pigment. The peritoneal cavity contains about one and a half gallons of a straw-colored serous fluid. Bowels are distended with gas, and variegated externally by deposits of old lymph. Stomach is distended with fluid. It is very small, capacity not more than a pint. It is firmly bound to all adjacent structures by bands of old and recent adhesions. Externally it presents the appearance and feel of an old cystic kidney. Its length is about eight inches; greatest breadth three inches. The walls of the pyloric two-thirds of the stomach vary from three-fourths of an inch to one-quarter in thickness, the calibre of this portion not being more than one and a half inches in diameter. The mucous surface is smoother than normal, and anæmic in appearance. While the growth encircles the stomach at its pyloric end (two-thirds), its thickest portion is along the lesser curvature. The walls at the cardiac end of the stomach are thinner than normal, easily torn, and present several ecchymotic spots. The pyloric orifice is greatly dilated, and admits of all the fingers of one hand being passed up to their second joint.

The calibre of the upper portion of the duodenum is two or three times larger than normal. The walls of the bowel at this point are thickened, but the thickening does not extend more than two or three inches, when the bowel resumes its normal appearance. General adhesions are found, binding together the greater and lesser bowels, but at no point are their calibres materially lessened. The caput coli is much enlarged, and its appendix is curled upon itself, presenting a snail-like appearance. Bladder healthy. Kidneys nearly normal in appearance. Spleen small, soft and pulpy. Liver slightly enlarged. The edges of incisions made in it are slightly prominent. The capsule is easily detached without tearing the hepatic substance. The interior of the organ is dark, pulpy, and very soft, being almost as easily torn with the finger as a healthy spleen. Gall-bladder is distended with a fluid similar in appearance to that found in the general peritoneal cavity. It also contains three angular stones about the size of a hickory nut.

A spherical growth, about five inches in diameter, is connected with the right ovary. About two-thirds of the tumor is formed by a cyst whose walls are about an eighth of an inch thick. The inner surface presents a cheesy appearance from broken-down exudated lymph. The contents of the cyst are a dark, muddy liquid. The remainder of the tumor is made up of a caseous-like substance, in which a cyst about the size of a walnut is found. Connected with the left ovary is an ovoidal growth, about three inches in length and two in breadth. The tumor is made up of a fibro-fatty substance. The womb is quite small, and apparently is not the seat of any disease.

The stomach seems to be the point of chief interest in the above case. The absence of nausea, vomiting, eructations, and other symptoms of gastric indigestion in a contracted stomach, the pyloric two-thirds of whose walls are infiltrated by a neoplastic growth, can be explained only, I think, by the presence of the enormous dilatation at the pyloric orifice. This condition of affairs permitted indigested food to pass from the stomach into the bowel readily. Gastric digestion was apparently almost *nil*, the fluids in the intestine performing their own function and that of the gastric juice.

It is probable that the growth in the stomach is secondary to those of the ovaries, and that the peritonitis followed by ascites was occasioned by the fall received eight months before the death of the patient.

The President said that he had never seen a case of disease of the stomach with so much thickening of walls and contraction of the cavity combined with so much dilatation of the pyloric orifice.

Dr. Formad said that, judging from the specimen, without a microscopic examination, he did not think there was any trace of cancer either in the ovaries or stomach. It looked more like a case of chronic fibroid gastritis. He has seen several cases of that kind. They are described and figured by Thierfelden in his *Pathological Atlas*. He also has in his possession a specimen of the affection. The ovaries also look fibrous, and malignant disease of the ovaries is usually sarcomatous. It would be interesting to know if there were any metastases, but it is not likely. In fibroid disease of the stomach the muscular coat is affected by fibroid changes, as is also the mucous coat.

Dr. Musser thought that it would not be possible to say positively what the growth was, unless a microscopic examination was made. It resembled very much a case which he had reported to the Society some time ago. The disease in that instance was confined to the stomach.

Dr. Eskridge, in reply, said that after examining the specimen carefully he felt that he would not be justified in calling it either sarcoma or carcinoma, and so called it a "malignant growth." In reply to Dr. Formad's query as to whether there were any metastases, he said that there were none. He would like to ask Dr. Formad if, in the cases he referred to, there was intolerance of food. In this case there was an absence of vomiting, notwithstanding the extent of the disease.

Dr. Formad said that he did not have the cases under his care clinically.

The President said that in one of his cases, with all the symptoms of cancer of the stomach, post-mortem examination showed what was called fibroid thickening by one pathologist, but which Dr. Formad and himself regarded as cylindrical epithelioma.

The specimen was referred to the Committee on Morbid Growths for examination.

Dr. de Schweinitz exhibited, for Dr. J. Ashhurst, Jr., specimens of

CYSTO-SARCOMA OF THE FEMALE BREAST,

with the following history: Bridget C., æt. 38, single, was admitted to the University Hospital during August of this year. She is a blonde, moderately anæmic from menorrhagia, with a sallow complexion, and in poor general health. Suffered with constant flatulent dyspepsia and headaches. Father died of phthisis; mother, living and healthy; two brothers alive and in good health; and of three sisters, two are healthy and one, younger than the patient, suffers with chronic gastric disturbance, probably some form of dyspepsia. No family history of carcinoma or tumor of any kind could be obtained.

In February, 1883, she first noticed a commencing lump in her left breast. This gradually increased in size, the growth being painless until the following March, when she began to suffer intermittent pain of lancinating character, and the tumor's growth became more rapid. She applied for treatment, and on August 9th Dr. Ashhurst removed the breast; the patient making a good recovery. No history of previous inflammation in or injury to the breast was obtained. Microscopically the nipple is seen to be healthy, though small, and the skin is freely movable over the surface of the tumor. Upon section it will be noted that the growth is filled with cysts varying in size from a pigeon's egg to some as small as split peas. The cut surface shows clefts of a more or less parallel or concentric arrangement, sometimes intercommunicating and giving the mass a characteristic appearance which Virchow has compared to the divided head of a cabbage. These cysts, at the time of the operation, contained a dark-colored, viscid, mucus-like fluid, while some of the smaller cavities were filled with a cheesy material, composed of degenerated epithelial cells. The interior of the cyst-cavities are smooth but irregular, being pushed up here and there by papillary excrescences of their walls. Macroscopically the tumor is one of the forms of *cysto-sarcoma* of the breast. Microscopic examination of the growth shows it to be composed of several forms of tissue. In the main, it is made up of fibrous tissue, sometimes loose and wavy, but more often well felted together or even so densely packed as almost to approach homogeneity. The acini are enlarged. The excretory ducts are dilated, lined with cuboidal or cylindrical epithelium which is frequently luxuriantly hyperplastic. Scattered through the fibrous matrix are round and some small spindle-cells, which, in the neighborhood of the lactic ducts, are more numerous, and simulate sarcomatous tissue. The cyst-walls are composed of fibrous tissue and lined with epithelium. The origin of these cysts is of course to be found in the altered excretory ducts. The rather rapid growth of the tumor, and the papillary excrescences into the lactiferous ducts would seem to indicate that this tumor belongs to the class cysto-sarcoma mucosum; but minute examination fails to show the presence of mucoid tissue. Its considerable hardness and dense fibrous structure, however, classify it more properly as a *cysto-sarcoma fibrosum* or a fibroma intracanaliculare papillare mammæ of Virchow's classification.

Dr. de Schweinitz also exhibited specimens of

RECURRENT SCIRRHUS OF THE MALE BREAST,

taken from the person of Moses W., æt. 60, a native of Ireland, and at the time of operation an in-patient in the University Hospital. He was of dark complexion, had a somewhat cachectic look, of bilious constitution, and rather melancholic temperament. His family consisted of ten members. Father and mother died in old age; of his brothers and sisters he had little knowledge, but, as far as he knew, none of them ever suffered with carcinoma in any form. Four and a half years ago, a small kernel appeared beneath his left nipple. Gradually the nipple retracted, and the tumor slowly increased in size, until, at the end of a year and ten months, its dimensions were those of an orange. He then applied for treatment and a Belfast surgeon removed the growth. Eight months later the growth began to recur in loco, the first nodule appearing in the scar at the point where a stitch was passed in the approximation of the wound. During August of this year, he came to the University Hospital, and Prof. Ashhurst removed the secondary growth and also some enlarged axillary glands, which the patient claims were present at the time of the original operation. The patient denied any injury or inflammatory trouble in his breast previous to the appearance of the original tumor. He also denied that this breast had been larger than its fellow, or that it had ever secreted milk. Macroscopically the growth is seen to be composed of two portions, the one, larger, is a fibrous mass, rising above the level of the epidermis, brownish-red in color on the surface, and yellowish-white within, and of moderate consistence. The skin in the immediate neighborhood at the time of operation was of a dusky hue. The other and smaller portion, is a nodule situated beneath the skin in the subcutaneous connective tissue, and is of similar color and consistence. A section under the microscope shows a connective-tissue framework, composed of round and oval alveoli, and scattered through it some spindle and round cells. These alveoli are quite closely packed with polymorphous epithelium, but chiefly of a spheroidal type. Much yellow elastic tissue is present in all sections. The skin in the neighborhood of the larger mass is involved in the carcinomatous process. The tumor is an ordinary scirrhus or spheroidal-celled carcinoma.

It is needless to speak of the interest which attaches to carcinomata of the male breast and of their infrequency of occurrence when compared with similar growths in the female mammary gland. I need only refer to Prof. S. W. Gross' interesting exhibit and remarks upon this subject in this Society's *Transactions*, vol. vi. I have mentioned that the tumor recurred at the point where a stitch was passed. It is permissible to speculate whether, if the surgeon's knife had removed a larger area of skin, this local recurrence would have been prevented or at least delayed. It would not be an uninteresting study to make sections of the edges of flaps that are about to be approximated after the removal of malignant growths, and note whether any morbid manifestations would present themselves, ready to be lighted up in active growth by any irritation, as in this instance by the passage of a suture. At all events this may serve the purpose of another warning that all incisions for such purpose should be carried as far into healthy tissue as is possible.

Dr. W. E. Hughes presented some specimens from a case of

PHTHISIS WITH ABSENCE OF PARIETAL PERICARDIUM AND MALPOSITION OF LIVER,

with the following clinical history: C. L., white, æt. 33, was admitted to the University Hospital, July 21, 1882. He had been previously in the Philadelphia Hospital, under the care of Dr. E. T. Bruen. By occupation a carpet weaver, he had done of late years general laboring work, often much exposed to weather. He had been a moderate drinker and user of tobacco. There was a distinct history of asthma in the family both mother and maternal grandfather having been affected, but no phthisis. When eleven years old, he had pneumonia, and since then winter cough. Till three years before being seen he was well and strong, then the cough became continuous, and flesh and strength began to fail; a year afterwards dyspnœa developed; at first produced only by exertion, it soon became constant, and a most urgent symptom in the case. In the fifteenth month preceding admission to the hospital, he had had two or three attacks of excruciating pain about the fifth interspace to the right of the sternum. The attacks would begin suddenly, last a few minutes, and disappear as suddenly as they came, leaving him completely exhausted. On admission to the hospital he was weak, somewhat emaciated, breathless, face sallow with a circumscribed flush on left cheek. Expression cheerful. Left pupil larger than right, both responded well to light. Cough constant, rather dry, some muco-purulent expectoration in the mornings, dyspnœa constant, with marked exacerbation on exertion. Appetite and digestion poor, bowels irregular. On the right side of the chest a distinct prominence reaching its greatest elevation at the fifth interspace, midway between the sternum and nipple. Over right chest poor movement with flattening at the apex. At the apex there were evidences of a cavity, while from the third rib to the base and from the sternum to the anterior axillary line (over the area of prominence just spoken of) there was flatness, with absence of vocal resonance and fremitus; posteriorly, dulness with mucous râles and scattered friction sounds.

On the left, resonance was impaired at the apex, and respiration blowing, elsewhere normal. The apex beat of the heart was in the fourth interspace, one half inch outside of the left nipple. With the systole could be noticed a slight localized retraction of chest wall immediately inside the apex beat. Cardiac dulness extended from the right border of sternum two inches to the left of the sternum in the second interspace, two and a half inches in the third, and three and a half inches in the fourth. First sound weak and valvular. Second pulmonary sound accentuated and reduplicated. Liver dulness extended to the margin of the ribs anteriorly, continuous above with the flatness in the chest, posteriorly it was normal. A diagnosis of chronic plastic pleurisy, with consequent phthisis, was made, and the needle of an aspirator introduced about the middle of the area of flatness with negative results. The needle, as was shown after his death, must have punctured the liver. While in the hospital his condition remained much as it was on admission. A most interesting symptom was one connected with the pupils. They were usually unequal, sometimes the right, sometimes the left being the largest. When first seen the flush was limited to the cheek corresponding with the largest pupil.

March 15, 1883.—After a fall, he had a slight pulmonary hemorrhage and died in fifteen minutes, of apnœa, the heart continuing to beat after the respirations had ceased.

Autopsy (twelve hours after death).—The upper right lobe of the lung had been converted into a cavity with contracting walls. The upper part of the middle lobe had undergone marked fibroid change. The rest of the middle lobe and all of the lower were collapsed, congested, pushed back by the liver, which lay in front of them. The lung was universally adherent to the chest wall and diaphragm. The left lung had small masses of cheesy deposit at its apex, with the remaining substance healthy. It was less adherent than right. The heart was normal in size and position. The valves and great arteries were normal. What lends the case its chief interest was a complete absence of pericardial sac, the heart lying free in the left pleural cavity, its surface in contact with the left visceral pleura. Toward the apex there were a few fibrous bands connecting the heart with the lung and diaphragm (evidently the results of old pleurisy), while toward the base it was impossible to separate the heart and lung on account of the density of the adhesions. The serous covering of the heart was directly continuous with the visceral pleura. From the diaphragmatic pleura immediately beneath the heart was a fold of serous membrane one inch broad, three inches long, apparently an abortive attempt at the formation of a pericardial sac. No such formation could be demonstrated at the base, on account of adhesions between the heart and lung. The liver presented a curious departure from the normal position. The right lobe about its middle turned sharply upon itself, and, carrying the diaphragm with it, extended upward to the third rib. This accounted for the prominence and dulness in the chest before noted. The gall bladder was carried with the liver, its fundus pointing upward. The left lobe was very small and was not carried up with the right. On section the liver showed a nutmeg appearance. The other organs were normal.

DR. EDWARDS said that the misplaced liver had been punctured several times by the attending physician, while he was his resident. The idea was to see if there was any accumulation of fluid at the place on the chest where resonance was absent.

DR. ESKRIDGE said that he had a case in which he thought the pericardium was incomplete, but he came to the conclusion that it was normal; the anterior layer of the pericardium having been removed along with the sternum, to which it was afterwards found attached.

DR. FORMAD said that he helped to make the autopsy, and was perfectly sure that the parietal layer was absent. On removal of sternum, the heart was visible. The parts were very carefully investigated. The heart was seen lying in the left pleural cavity. On looking up the literature, he found in Virchow's *Archives* three or four such cases recorded. In this case there was some anomaly of the diaphragm and displacement of the liver. There was a healed phthisical cavity at the top of the right lung, and it is possible that in healing the scar may have caused the retraction of the diaphragm and ascent of the liver.

DR. HUGHES.—There are cases on record of this anomaly. There was no adhesion of the two layers of the pericardium, or of the pericardium and pleuræ. The cicatricial contraction of the lung would hardly have been sufficient to draw the liver so far out of position.

DR. MUSSER had had two cases in which marked retraction of the chest-wall occurred at each heart-beat. In these cases there were no pericardial adhesions. Clinically, he regarded retraction of the chest-walls as of no value in the diagnosis of pericardial adhesions.

DR. SEILER asked if Dr. Formad considered that the lung disease was tuberculous.

DR. FORMAD replied that he considered it a case of fibroid phthisis.

DR. HUGHES said that there was some cheesy material in the left lung, but not in the right.

DR. WOODBURY said that he saw in the Pennsylvania Hospital, two cases of absence of a part of the pericardium. One was congenital and the other was due to inflammatory action. In the specimens presented this evening, there may have been inflammatory adhesions early in life, and later on rupture of these and of the pericardium.

DR. WM. G. MACCONNELL exhibited microscopic specimens from a case of

SPINDLE-CELLED SARCOMA OF THE RECTUM,

operated upon by Dr. Levis.

J. M., æt. 43 years, machinist, three years ago noticed pain, uneasiness, and tenesmus of the rectum; was very constipated, and was compelled to resort to purgatives aided by enemata to secure an evacuation. Bleeding rarely occurred and was then due to the passage of hardened feces. Two years ago he was laid up with an inflammatory attack, as he said, in the neighborhood of the rectum, accompanied with attacks of retention of urine lasting for two to three days, which have recurred from time to time until the operation. At the end of the second year he first noticed a tumor, about the size of a walnut, which was detected by the patient's finger within the rectum. He habitually passed his finger through the anus to relieve the tenesmus, etc. The tumor was hard and steadily increased, until at the time of operation it was of the size of a fœtal head. It was globular, nodulated, and sessile. By bearing down he could protrude the tumor, when the parts presented the appearances of the fœtal head when distending the vulva. The tumor was soft and elastic, weighing nearly one and one-half pounds, and on microscopic examination proved to be a small spindle-celled sarcoma.

NEWS ITEMS.

CINCINNATI.

(*From our Special Correspondent.*)

The Relation of Physicians and Druggists.—The committees appointed by the Academy of Medicine, the Cincinnati Medical Society, and the Pharmaceutical Society, held a joint meeting on the 26th of September, to consider and, if possible, rectify the charges made against the druggists. The charges were: illegal prescribing, the advertising of patent medicines, the repetition of prescriptions without the physicians' order, and the substitution of other drugs for those prescribed. Others might have been added. The druggists based their defence upon the flimsy counter-charge that the physicians too often prescribe proprietary articles and sugar-coated pills. This was a feeble charge, because the profits on these proprietary goods and sugar-coated pills are so fair that the druggists aid the manufacturers in advertising, and it is but a few days since prescription blanks specifying a certain make of pills were distributed to the physicians by the retail druggists. A committee was appointed to draft rules to govern (?) both physicians and druggists.

The Health of Cincinnati still remains remarkably good. There were but sixty-eight deaths during the week ending October 27th, a rate of 12.29 per thousand of the population per annum. The report further states that twenty-one were "*infants* under five years of age."

Yellow Fever in Mexico.—Acting Assistant Surgeon Main, stationed at Brownsville, Texas, in a report to Surgeon-General Hamilton, under date of October 16, states that "Matamoras, Mexico, still continues a twenty day quarantine against Havana, but has reduced it to eight days against Vera Cruz. Tampico and Tuxham have adopted the same regulation." He says: "there is no yellow fever north of Vera Cruz on the gulf coast, and that it has disappeared as an epidemic at Vera Cruz; though a few sporadic cases of a non-malignant type occur in the city. Tabasco, Campeche, and Progresso continue to be nests for its propagation, and that Vera Cruz and latitudes south are the zones of its hibernation." He learns "that the fever has been much more fatal at Culiacan than previously reported on the 8th of October, the average mortality being three daily up to the 1st of October, and nine daily since that date. Less care seems to have been taken to prevent its propagation than was observed at other points of invasion, and the consequence is that the fever has spread through some twenty villages which lie between that city and the mountains. In like manner it has spread with rapidity northward, dealing death to the Indians. There is constant travel and traffic from these points to the frontier of Arizona and Upper California by land, and steamship navigation on the Gulf of California to the Colorado River (which empties its waters into the Gulf of California), thence to Fort Yuma on the Gila River, carries the disease northward. Some cases of fever of an unknown type (?) have already been reported in Arizona as having occurred among some travellers from the affected districts further south.

"At Mazatlan the fever still exists. Great complaint is made by the press against the doctors, and the nurses are said to be incompetent. At La Paz no provision whatever was made for the fever, notwithstanding a timely warning of the approaching danger was given, and the consequence is that the fever is spreading to the interior towns of Lower California on both east and west coasts (the State being a peninsula), and thus the fever may make its way by both coasts to San Diego, in upper California. At Mazatlan, where the same indifference was manifested, there had been, up to the 8th of October, 521 deaths from yellow fever; at that date the disease was rapidly diminishing, doubtless for lack of material. The fever still exists at Presidio and Concordia in the State of Linaloa, with an average mortality of three deaths daily for the past ninety days. In the State of Jalisco, the towns of Coraco and Gualian have suffered greatly, and it is reported that three thousand had fallen victims to the disease, with a mortality of three hundred and eighty-one in ninety-two days. Here, also, the fever is slowly but steadily decreasing. At the last-named place, the garrison consisted of 600 soldiers, 150 of whom died of yellow fever; and an opera company of 31 members lost 25 by death. Out of eight doctors, two died. In Manzanello and Mazatlan the fever is rapidly disappearing, as is also the case at points south of these two cities. It is north and west that the disease is travelling, and there is danger of its creeping into Arizona and Upper California, where the great system of railways which here begin to network the country may carry it into the east like a prairie fire." Dr. Main concludes his report of the devastating disease in Mexico by saying, "Few Mexican papers reach the frontier, very few people read them, and fewer still reach or are read or understood in the United States."

Sanitary Inspection of Passenger Trains.—Sanitary Inspector M. F. Price, stationed at Yuma, A. T., reports for the week ending October 20th, that he had "thoroughly inspected all west-bound trains carrying passengers, and that he found neither sick nor persons from points infected with yellow fever."

Sanitary Inspector W. E. Chesley, stationed at Benson, A. T., reports for the week ending October 20th, that no passengers had arrived from Mexico during the past three days, via. the N. M. & A. R. R.

The quarantines established at Yuma and Benson, Arizona, were raised on the 29th of October, and the Sanitary Inspectors relieved from duty on the 30th.

Public Health in Rio Janeiro.—Consular reports from Rio Janeiro, state that but two deaths from yellow fever occurred in Rio during the week ending September 22d. There were forty-one deaths from smallpox, and forty from pulmonary consumption for the same period. Fifty-one cases of smallpox and ten deaths, occurred at Colombo during the month of September.

Sanitary Inspection at Havana.—Sanitary Inspector Burgess at Havana reports, for the week ending

October 20, that bills of health were furnished vessels bound for United States ports after inspection by him as follows: Am. schr. "E. P. Church," for Key West; Brit. str. "Pensher," for Boston; Spanish str. "Castilla," for New Orleans; Spanish str. "Ana de Sala," for Savannah; Brit. str. "Monkseaton," for New York; Am. str. "Saratoga," for New York; Am. schr. "A. Kingsland," for Key West; Spanish bk, "Nueva Lantaro," for New Orleans; Am. str. "City of Pueblo," for New York. Of the above vessels, four only required disinfection, as the others were all clean, and remained in open bay, and did not approach the wharf. The Spanish bk. "Nueva Lantaro," bound for New Orleans, was forty-five days in port, twenty of them discharging at a suspicious wharf. While there, two of her crew had yellow fever, recovered, and sailed with the vessel. There were eighteen deaths from yellow fever at Havana during the week.

The Sanitary Cordon at Pensacola Navy Yard, ordered to be discontinued on the 25th October, was continued until the 1st November, at the urgent request of the Board of Health of Pensacola, seconded by the commanding officer of the yard.

Sanitary Inspection at Vera Cruz.—Sanitary Inspector Mainegra, in his weekly abstract of bills of health, issued at Vera Cruz, for the week ending Oct. 10th, shows that he inspected the following named vessels bound to U. S. ports. Strs.: "E. M. Sidbury," bound for New Orleans; "Explorer," for New Orleans; "City of Pueblo," for New York. All were found to be in good sanitary condition.

The Appointment of Surgeon-General of the Army.—The delay in making the appointment to fill the vacancy created by the death of Surgeon-General Crane is said to be due to the extraordinary pressure being brought to bear on the President and the Secretary of War in the interests of the different candidates for the office. It is expected, however, that the vacancy will be filled during the present week.

Cholera in Egypt.—The reappearance of cholera has revived the panic among the people in Alexandria, and the passengers on vessels from European ports are returning without landing. The fatal cases occur chiefly among the Europeans. Twelve deaths from the disease in Alexandria were reported on the 27th, and six on the 28th, of October. The disease has appeared at Mecca.

The Pasteur Mission, sent to Egypt to study the cholera, left for France on October 2d.

The Koch Mission.—It is stated that the Koch Mission, in its report on the cholera, has decided that the disease was imported into Egypt.

American Public Health Association.—The Eleventh Annual Meeting of this Association will be held at Detroit, Mich., from November 13th to 17th.

The Executive Committee will have rooms at the Russell House, and will hold a session each morning and evening at 9 o'clock.

The main subjects for discussion will be upon Sanitary Science, Malaria, Adulteration of Food, Physical Exercise, Vital Statistics, and Diseases of Animals, and will probably be taken up in the order named. It is expected that there will be two or more papers upon each subject, and from the most eminent sanitarians and physicians in the country.

All papers intended for presentation at the meeting must be in the hands of the Secretary or the Chairman of the Local Committee (Dr. Wm. Brodie) by November 10th, and if any have failed to notify the Secretary, or to furnish a synopsis of such paper, they must do so immediately.

Among the papers expected are the following:

Malaria; the Status of the Germ Theory as to it. By Dr. George M. Sternberg, Surgeon, U. S. A.

Malaria; the Paludal View and its Status. By Dr. A. A. Woodhull, U. S. A.

Malaria. By D. W. C. Wade, Holly, Michigan.

House Drainage and Plumbing. By R. Hering, C. E.

The Regulation of Sanitary Plumbing. By Dr. Raymond, Board of Health, Brooklyn.

Overhead Ventilation of Drains and Sewers. By Dr. Oldright, President of the Provincial Board of Health, Ontario, Canada.

The Identification of Disease by Vital Facts. By Elisha Harris, M.D., Secretary of New York State Board of Health.

Vital Statistics. By A. L. Gihon, U. S. N.

Foods; their Adulteration and Preservation. By Prof. A. R. Leeds, M.D.

Laws as to Foods. By Wm. K. Newton, M.D., Paterson, N. J.

Physical Exercises and their Laws. By Prof. J. M. Watson, N. J.

Systems of Physical Training. By Prof. Sargent, Cambridge.

A Comparative Study of Texas Cattle Fever. By Dr. Salmon, Agricultural Department, Washington.

Animal Diseases. By Dr. Partridge, South Bend, Indiana.

Present Indications as to Vaccination. By Eugene Foster, M.D., Augusta, Ga.

The Massachusetts Coroner Law. By Dr. Abbott, Wakefield.

Health Boards, their Sphere and Methods. By Dr. J. T. Reeve, Wheeling, West Virginia.

These and other papers seem to promise a meeting of unusual interest, and will help to forward sanitary art, as well as contribute to the science.

A number of the western railroads have reduced their rates to members. Information concerning them can be obtained on application to W. K. Muir, Chairman of Transportation Committee, Detroit, Mich.

An Enjoined Medical Work.—Judges Hare, Mitchell, and Fell, on Saturday last, in the Court of Common Pleas of Philadelphia, after a brief argument refused to dissolve the injunction which, in August last, Judge Mitchell, on the complaint of Drs. D. Hayes Agnew and Alfred Stillé, issued against Dr. Samuel M. Miller, restraining him from publishing and selling a medical work containing an "Epitome of Medicine, Surgery, and Obstetrics." The complaint was that the matter contained in the book which the defendant has been selling is made up of a summary of the lectures which those professors have been delivering to their students in the University of Pennsylvania. On behalf of the defendant, it was argued that an oral delivery of matter to persons who attended on invitation or otherwise became common property to those who were present and remembered the subject discussed. He said that the students had never been notified that the lecturers reserved a right of property in their lectures; but, on the contrary, were directed to take copious notes of the lectures, and that the complainants had, in point of fact, corrected in proof various articles for medical publications, such articles having been made up of reports of their lectures. The Court heard no argument on behalf of the complainants, Judge Hare saying that there was not sufficient shown to induce the Court to dissolve the injunction.

Washington Obstetrical and Gynecological Society.—At the First Annual Meeting, held October 19, 1883, the following officers were elected for the ensuing year:

President.—Dr. S. C. Busey.

Vice-Presidents.—Drs. W. W. Johnston and J. Taber Johnson.

Recording Secretary.—Dr. C. H. A. Kleinschmidt.

Corresponding Secretary.—Dr. Samuel S. Adams.

Treasurer.—Dr. G. L. Magruder.

A New Medical Journal.—In response to the expressed desire for a weekly medical journal in Scotland, the first number of the *Edinburgh Clinical and Pathological Journal* was issued on the 13th inst. The journal is under the joint editorship of Drs. Graham Brown, Cathcart, and Berry Hart.

Bequest to the British Medical Association.—The General Secretary of this Association has received from the executors of the late Dr. A. P. Stewart, the sum of £200, in augmentation of the Stewart Fund, which was founded by the lamented Dr. Stewart out of funds raised for the testimonial to him by public subcription. This is said to be the first legacy which has been left to the Association.

Honors to Thuillier.—The French colony at Alexander, desirous of perpetuating the name Louis Thuillier, has decided to erect a monument to his memory. A central committee of subscription has been formed at Alexandria, and sub-committees at Suez, Ismalia, Port Said, and Cairo.

Professor Du Bois-Reymond celebrated, on October 15th, his twenty-fifth year professorial jubilee. A bust of the learned professor was presented and a jubilee-volume of the *Archiv für Anatomie und Physiologie* was issued.

Professor Jaccoud.—By a Presidential decree from the Faculté de Médécine, of October 6th, Prof. Jaccoud has been transferred from the Chair of Internal Pathology to that of Clinical Medicine, made vacant by the death of Prof. Lasègue.

Health in Michigan.—Reports to the State Board of Health, for the week ending October 20, 1883, indicate that dysentery, scarlet fever, tonsillitis, consumption, and influenza have increased, and that diarrhœa, remittent fever, cholera infantum, and neuralgia have decreased in area of prevalence.

Including reports by regular observers and by others, diphtheria was reported present during the week ending October 20, and since, at sixteen places; scarlet fever at twenty-four places, and measles at six places.

Obituary Record.—The death of Prof. Da Costa Alvarenga, formerly Minister of Public Instruction in Portugal, and author of several works on heart disease, is announced.

NOTES AND QUERIES.

A PROTEST AGAINST THE USE OF THE METRIC SYSTEM IN PRESCRIBING.

To the Editor of The Medical News.

Sir: I desire to enter a protest against the use of the metric system of weights in practice, and of metric doses or prescriptions in communications to medical journals, with this one reservation or request, viz., if medical writers desire to show off their foreign education, let them put an English translation with their articles, so they will be easier to understand and require no time for translation by their American readers.

Now I submit these three points in regard to our own and the metric systems:

First. In calculating any given quantity of a drug desired in a prescription, it can be done quicker by our or the English weights—grs., ʒ, ℥, etc.

Second. There is less liability to err in writing the English, as a slight misplacement of a decimal would make a vast difference in the metric system. True, we are all liable to make mistakes, and many have been made under the old system, but a brief comparison will show any one that either druggist or physician is less liable to make any kind of mistake with the old method.

Third. It takes less time or space to write the old method.

I submit two or three prescriptions which are taken from a journal before me:

R.—Arbutini, ...	10 0 grammes.	
Aquæ dest., ...	100.0 "	M.

Now how much quicker, with less liabillty to err, can our own method be written. Again—

R		R	
Morph. muriat., .	.0060 grm.	Chloroformi, . .	ʒij
Tinct. cannab. Ind.	.0800 "	Glycerinæ, . .	℥ij
Chloroformi, .	.1350 "	Alcohol., . . .	ʒij
Ol. menth. pip., .	.0025 "	Spt. menth. pip., .	ʒij
Tinct. capsici, .	.0025 "	Acid. hydrocyanici dil., . . .	ʒij
Acid hydrocyanici dil., . .	.0170 "	Tinct. capsici. . .	ʒij
Alcohol., . .	.3000 "	Morph. sulph., . .	grs. viij
Glycerinæ, . .	.4570 "	Syr. simpl., . .	℥iij
	M.		M.

These two formulæ of anodynes are very much alike, and I am of the opinion that any American reader of your journal can take the one expressed in grains, drachms, and ounces, and find the amount of each, or any one, remedy contained in a given dose of the preparation, thus enabling him to alter the size of the prescription or any of its component parts, quicker express the terms, more briefly, with less liability to err, than he can with the other or metric prescription. These are reasons enough for a protest against the system, to say nothing of the great trouble and inconvenience of translating it by those of us educated in America.

Very respectfully,

James Orr, M.D.

Terrell, Texas, October 20, 1883.

SEPTIC FEVER.

To the Editor of The Medical News.

Sir: The editorial on septic fever in a recent issue of The Medical News reminded me that I had met some similar cases for which I was lacking a name. Scattered over the last four years I have had about a dozen or fifteen such patients, the major part of them being under my care during July and August of 1881. As a rule, but one member of a family was affected. In one instance, however, there were three patients in the same house. A boy, eight years old; the father, thirty-five; and a grandmother, age doubtful, but at least sixty-five. The latter recovered from the fever proper, but not from the exhaustion, dying some two months later.

The following is a fairly typical case. I was called, September 9, 1883, to see J. L. S., aged 33, a laborer in a saw-mill, dwelling-house close to a large pond of water, partially surrounded by a swamp. The pond filled with logs, some of which, with other debris, had been there for years. Water supply from a surface well in the immediate neighborhood. He complained of severe pains in the head, abdominal cramps, and aching of bones. Had indefinite chills for several hours. (In some instances the chill was very marked, followed by considerable fever with weak pulse, 112.) Slight diarrhœa—from two to four passages per diem, sometimes appearing tarry. In no other patient, however, was this latter noticed. By the third or fourth day the diarrhœa had ceased, and further movements of the bowels had to be induced by cathartics. Did not regularly take the temperature, but the highest recorded was 103°. The fever, virtually a continued one with slight irregular remissions, largely abated by the eighth day, though for a week longer he would occasionally have a return of it, lasting a few hours. The tongue during the first week was covered with a thick whitish fur; later, nearly clean. No tenderness over the abdomen; no eruption; no recurrence of the chill (an occasional exception in other cases); loss of appetite; not much thirst. In most of the cases much prostration, the mind torpid and apathetic. A slow convalescence and gradual return of appetite. Average length of attendance about fifteen days. Of two fatal cases, one was the old lady above alluded to, the other a man of thirty-eight, complicated with pneumonia. These outbursts invariably occurred on low, marshy land. We have no typical malaria originating here, and our altitude (2250 ft.) precludes that possibility, yet in these cases one is insensibly led to feel that he is combating a morbific cause very similar to it.

So far as my experience goes, the town has been relatively free from epidemics. Located on the highest point of Cowno Mountain, exposed to stiff breezes the year through, infectious diseases would seem to have little chance for propagation. But along the water-courses large swamps abound, and during very dry weather the water is evaporated, leaving then a mass of decaying vegetation exposed to the direct rays of the sun. I cannot positively affirm that the emanations naturally arising under these conditions are responsible for the trouble; but the night-air, heavily laden with such noxious vapors, enveloping the *tired* and sleeping workman—it was generally such that were attacked—would thus find a favorable field for operation, and the fact that in a large community no cases were observed except in such connection, is strong corroborative evidence. Respectfully,

GEO. H. RHOADS, M.D.

TOBYHANNA, PA., October 24, 1883.

SCHOOL FOR FEEBLE-MINDED CHILDREN.

To the Editor of THE MEDICAL NEWS.

SIR: It is often a very difficult matter for doctors to advise parents what to do with more or less feeble-minded children, especially in the matter of education. If not placed in such an excellent institution as that at Media, I do not know any school where they can be taught, for it is impossible to teach them in ordinary schools with other children.

Lately, Miss Margaret Bancroft, of this city, has felt especial interest in this defective class, and if she can obtain a sufficient number of pupils, she proposes to establish a day-school for their education, giving them then, at the same time, the advantages of home-life.

Miss Bancroft has had many years' experience as a successful teacher, and she is known to me personally as a woman of the highest character, and is eminently fitted for just such a benevolent work. I am permitted also to use the names of Dr. Andrew Nebinger and Dr. J. Solis Cohen as additional references as to her fitness.

She proposes to have one teacher for every five scholars, so that each one shall have that individual attention necessary with such pupils. Any peculiar talent, no matter how slight, or any personal taste, will thus be used as an educational lever. The kindergarten system, so peculiarly fitted to develop the powers of such pupils, will be prominent in her school-work, and she is so fortunate as to have as an associate a graduate of Mrs. Van Kirk's well-known school for kindergartners.

Any one desirous of further information may address Miss Bancroft at No. 1007 South Twelfth Street, Philadelphia.

Very truly yours,
W. W. KEEN, M.D.

1729 CHESTNUT STREET, PHILADELPHIA, PA.,
October 26, 1883.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM OCTOBER 22 TO OCTOBER 29, 1883.

MOORE, JOHN, *Lieutenant-Colonel and Assistant Medical Purveyor.*—To be relieved from duty as Medical Director, Headquarters Department of the Columbia, to proceed to San Francisco, California, and assume charge of the medical purveying depot in that city.—*Par. 10, S. O. 243, A. G. O.*, October 24, 1883.

HORTON, S. M., *Major and Surgeon.*—Leave of absence for one month, with permission to apply for an extension of three months.—*Par. 6, S. O. 216, Department of the Missouri*, October 20, 1883.

WOLVERTON, WM. D., *Major and Surgeon.*—Granted leave of absence for one month.—*Par. 6, S. O. 201, Department of the East*, October 24, 1883.

BARNETT, RICHARDS, *Captain and Assistant Surgeon.*—Assigned to duty at Columbus Barracks, Columbus, Ohio.—*Par. 1, S. O. 240, A. G. O.*, October 20, 1883.

MANS, LOUIS M., *Captain and Assistant Surgeon.*—Assigned to duty at Fort A. Lincoln, D. T.—*Par. 4, S. O. 180, Department of Dakota*, October 15, 1883.

MERRILL, J. C., *Captain and Assistant Surgeon.*—Granted leave of absence for one month.—*Par. 7, S. O. 201, Department of the East*, October 24, 1883.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE UNITED STATES MARINE-HOSPITAL SERVICE, FROM JULY 1 TO SEPTEMBER 30, 1883.

BAILHACHE, P. H., *Surgeon.*—Detailed as member of Board to Examine Candidates for Promotion, August 23, 1883. Detailed as Surgeon-in-Charge, Cape Charles Quarantine Station, September 5, 1883.

MILLER, T. W., *Surgeon.*—Granted leave of absence for twenty-five days, August 31, 1883.

WYMAN, WALTER, *Surgeon.*—Detailed as member of Board to Examine Candidates for Promotion, August 23, 1883.

LONG, W. H., *Surgeon.*—Granted leave of absence for twenty days, September 25, 1883.

SMITH, HENRY, *Surgeon.*—Directed to take charge of Quarantine Service at the Capes, July 29, 1883.

STONER, G. W., *Passed Assistant Surgeon.*—Granted leave of absence for thirty days, August 24, 1883. To inspect the relief stations along the coast of Maine, September 29, 1883.

GOLDSBOROUGH, C. B., *Passed Assistant Surgeon.*—Granted leave of absence for thirty days, August 29, 1883.

BANKS, C. E., *Assistant Surgeon.*—Relieved from duty at Portland, Oregon, and to report to the Surgeon-General at Washington, July 10, 1883.

CARMICHAEL, D. A., *Assistant Surgeon.*—Granted leave of absence for ten days, August 31, 1883.

PECKHAM, C. T., *Assistant Surgeon.*—To proceed to Portland, Maine, for temporary duty, August 25, 1883.

DEVAN, S. C., *Assistant Surgeon.*—To proceed to Portland, Oregon, and assume charge of the Service, September 11, 1883.

KALLOCH, P. C., *Assistant Surgeon.*—To proceed to Philadelphia, Pa., for temporary duty, July 25, 1883. To rejoin his station (New York), July 31, 1883.

YEMANS, H. W., *Assistant Surgeon.*—Relieved from duty at Sitka, Alaska, and to proceed to Portland, Oregon, for temporary duty, July 10, 1883. To proceed to San Francisco, California, reporting for duty to Surgeon Vansant, September 11, 1883.

GLENNAN, A. H., *Assistant Surgeon.*—To remain at Norfolk, Va., until further orders, July 29, 1883.

WASDIN, EUGENE, *Assistant Surgeon.*—To proceed to New Orleans, La., for temporary duty, August 27, 1883. To proceed to Mobile, Ala., for temporary duty, August 27, 1883. To rejoin his station (New Orleans) as soon as practicable, September 25, 1883.

PROMOTIONS.

GUITERAS, JOHN, *Passed Assistant Surgeon.*—Promoted and appointed Passed Assistant Surgeon, by the Secretary of the Treasury, from September 1, 1883. August 31, 1883.

WHEELER, W. A., *Passed Assistant Surgeon.*—Promoted and appointed Passed Assistant Surgeon, by the Secretary of the Treasury, from September 1, 1883. August 31, 1883.

RESIGNATION.

O'CONNOR, F. J., *Assistant Surgeon.*—Resignation accepted by the Secretary of the Treasury, to take effect August 1, 1883. August 2, 1883.

APPOINTMENT.

WASDIN, EUGENE, M.D., of South Carolina, having passed the examination required by the Regulations, was appointed an Assistant Surgeon, by the Secretary of the Treasury, August 2, 1883.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. XLIII. SATURDAY, NOVEMBER 10, 1883. No. 19.

ORIGINAL LECTURES.

HÆMATURIA OF THREE YEARS' STANDING,

PROBABLY OCCASIONED BY A VILLOUS TUMOR OF THE VESICAL SURFACE OF THE PROSTATE AND POSTERIOR WALL OF THE BLADDER.

A Clinical Lecture.

BY JOHN ASHHURST, JR., M.D.,
PROFESSOR OF CLINICAL SURGERY IN THE UNIVERSITY OF PENNSYLVANIA.

(Reported by Louis J. Lautenbach, M.D.)

GENTLEMEN: The patient who comes before us this morning is a man who presented himself at the Medical Out-patient Department, and who has been referred to me by Dr. Musser. The case is interesting as concerns the question of diagnosis. The patient has a very anæmic appearance; in fact, he has more than this, he has a cachectic appearance—such an appearance as is usually connected with grave visceral disease.

His history is that for the last three years the urine which he passes has been very thick and red; it is now, as you see by this specimen, full of blood, with a number of clots. At times the clots, during micturition, become wedged in the urethra, forming an obstruction, and causing for the time being retention of urine, and it often occurs that it is only by prolonged straining that the passage is cleared. Sometimes the urine is clear, as far as blood is concerned, but there is always a large deposit on standing. It is evident that this hæmaturia must have a definite cause, and it is this which we will endeavor to determine. The presence of blood in the urine may signify a great many different things. The blood may come from the kidney, being associated with some disease of that organ; in this case, unless there were very free bleeding indeed, it would not give such a bright color as we have here. The color of the urine when bleeding occurs from the kidney is usually a smoky hue. We notice this "smoky urine" frequently in the Bright's disease following scarlet fever. Unless the bleeding from the kidney is very profuse, we do not have the tint deep enough to be even a decided red. Sometimes from the appearance of the clots in the urine, we can get an idea of where the bleeding comes from. If the bleeding comes from the kidney, the clot, when floated out in water, may assume the shape of the pelvis of that organ; but in order to allow a clot of this size to pass, the ureters must be much dilated. Sometimes we find a long, thin clot, assuming the shape of the inside of the ureter itself; and then it is a fair inference that the bleeding comes from the ureters. Here, in this case, however, the clot has no definite shape.

Besides these two sources, the blood may come from the bladder itself. If in examining these clots we find that they are soft and easily torn, showing them to be recent, and that they have no definite shape, they may probably come from the bladder. Vesical hemorrhage may be due to the presence of stone, but this is not very usual in adults, occurring more frequently in children. Especially is stone liable to occasion hæmaturia when the stone is composed of oxalate of lime or when its surface is made up of sharp crystals of uric acid, which sometimes form little prongs or projections. The bleeding from calculus is increased by taking exercise, and especially by horseback riding, or by driving over a rough road. Stone is, however, much less frequently the cause of bleeding than would at first be supposed.

Vesical bleeding, again, may come from acute inflammation—cystitis—causing hemorrhage just as we see it produced in other inflammations of mucous membranes, as in very severe sore-throats, and in the early stages of pneumonia. Were this patient suffering from acute cystitis, however, he would have fever, and his general condition altogether would be different. He would beside have intense pain in the region of the bladder, nor could the disease have lasted as long as he has had the hemorrhage. Other causes of hemorrhage from the bladder are villous growths, which are very vascular, bleeding upon the slightest touch, or even without any external injury, simply from excessive congestion.

Carcinoma of the bladder as a primary affection is excessively rare. I have seen but one case of it, and in that case there was at no time any hemorrhage, the patient dying before the growth had involved the vesical mucous membrane. Were this a case either of carcinoma or sarcoma of the bladder, we would probably feel a decided tumor immediately above the pubis, but here there is no tumor to be felt. Another source of vesical bleeding may be tubercle of the bladder, which, however, is rare, and probably never exists except in cases of general tuberculosis.

Hæmaturia again may be occasioned by disease of the prostate or of the urethra. Were the hemorrhage caused by disease of the urethra, the blood would come before the urine. Should the hemorrhage come from a diseased prostate, while some blood would still precede the urine, another portion would be more thoroughly mingled with the urine than would be the case were the bleeding dependent upon urethral disease, but it would not be so intimately mixed as we find it in disease of the bladder. Here the blood is tolerably well mingled, and yet the clots come before the urine, as the patient tells us that, when he first attempts to pass water, they sometimes prevent urination by their lodgement somewhere along the course of the urethra.

In this case, then, the diagnosis narrows itself down to either some morbid condition of the prostate, or some morbid condition of the neck of the bladder, probably a villous growth.

The prostate may be the seat, either of some malignant growth or of simple enlargement. Hemorrhage from the prostate does not necessarily imply the existence of malignant disease. I remember a case in which the catheter was introduced, where there was an enlarged prostate, and in which pure blood flowed in a stream through the instrument. The patient dying some time afterwards, the autopsy revealed a simple hypertrophy of the gland.

This man had an instrument passed two or three weeks ago, and it gave him a great deal of pain; I have therefore promised him to pass the sound with which I intend to explore his bladder as gently as possible, and, if its use should prove very painful, to desist from its employment. On making a rectal examination without the use of the sound, I find that there is certainly no very great enlargement of the prostate in the direction of thickness; certainly not more than we frequently find at this age (forty-eight years). Now, on introducing this sound, which is a very small one, I find that there is a very irritable condition of the urethra, this being first noticed just within the glans.

Having introduced the sound, I will again examine the prostate and neck of the bladder by placing a finger in the rectum. I know by the way that the instrument went in that there is enlargement of the prostate, and this is also shown by the position of the sound, deeply buried in the urethra, while the handle only is visible. There is no marked enlargement in the direction of thickness, but there is decided increase in the long axis. It is very probable that there is here a villous tumor involving both the neck of the bladder and the vesical surface of the prostate, which, as we know, are frequently similarly involved.

While the instrument is in the bladder, I will take the opportunity to ascertain, if possible, whether a stone is present. I find no stone, but cannot make a thorough exploration, as every movement of the sound is met with considerable resistance, and gives the patient pain.

Our diagnosis, as far as it can be made, is that, besides the obvious prostatic hypertrophy, there is a tumor involving the surface of the prostate, and probably also the posterior wall of the bladder. Of the precise nature of the tumor we cannot be certain. By microscopic examination of the urine, we might possibly find fragments of a villous tumor; but if such fragments were not found, still their absence would only be negative evidence, and would not prove that the tumor was not of that character. The growth is probably neither a scirrhus nor a sarcoma, both of these being attended with a greater degree of hardness. If it were possible, moreover, for either of these diseases to exist for three years without destroying its subject, we would probably find other parts also involved; but there is not the slightest evidence of this here. The growth is probably a villous tumor, or perhaps a papillary form of epithelioma; the exact diagnosis could be made by the microscope alone.

As regards treatment, the tendency in recent years has been to resort to an operation in these cases, to confirm the diagnosis; and, if a tumor is found, to endeavor to remove it. One operation which has been employed is the opening of the bladder above the pubis; another is to make the incision as in lateral lithotomy. Either of these operations would be attended with considerable danger. Suprapubic cystotomy is always accompanied with risk, and the lateral operation, requiring division of the prostate, would in a case like this be followed by very free bleeding. A better operation, under these circumstances, would be that recommended by Sir Henry Thompson. A median incision is made in the perineum, opening the urethra in front of the prostate; this incision would not involve any part of the tumor, but would allow the introduction of a finger to explore the bladder, and, if a tumor were found, probably a considerable part could be scraped away with a small scoop or curette. A palliative mode of treatment, which, however, would be contra-indicated here by the very irritable condition of the urethra, would be the frequent injection, through the catheter, of nitrate of silver solutions, or other astringents, of gradually increasing strength.

ORIGINAL ARTICLES.

THE USE OF CASCARA SAGRADA IN HABITUAL CONSTIPATION.

By HERBERT C. ROGERS, M.D.,
SURGEON TO THE LONG ISLAND COLLEGE HOSPITAL DISPENSARY.

Cascara sagrada was brought to professional notice about the year 1878. In small doses I find it has a tonic action. It gives tone to muscular tissue, and exerts some influence on the liver. In large doses it is a purgative, acting specially on the large intestines. It increases the intestinal secretions, and also the peristaltic action of the bowels. The extract of belladonna and purgatives increase its action. I have, during the past year and a half, prescribed cascara a great many times, and have found it a reliable and valuable medicine. It is chiefly in chronic constipation that I prescribe cascara. In habitual constipation, it is one of the very best laxatives we possess. To persons of a sedentary occupation, with constipation and general sluggishness of the bowels, the administration of the fluid extract of cascara sagrada, in small doses, will generally be very beneficial.

I usually give the fluid extract in from twenty to thirty minims, in a little coffee, night and morning, until it begins to act, when I diminish the dose, and also omit giving it in the morning. Some persons may object to taking the fluid extract on account of its bitterness. To such persons I am in the habit of giving the cordial of cascara, and I think that it is also better suited for children and babies. The only reliable preparation that I have been able to find is that made by Parke, Davis & Co., of Detroit, Mich. Their preparations of the fluid extract and cordial have given me entire satisfaction.

The following are a few of the cases in which cascara has been used with success:

Case I.—Chas. Z., aged 9; U. S. From birth he appeared to be a strong, healthy baby. When eighteen months old, he had summer trouble, which left him in a weakened condition. At the age of five years, he had what the doctors called typhoid fever; he was sick two months. Since that time he has had more or less trouble with his bowels. He would go a week without any movement; then, after taking a cathartic, he would suffer from a diarrhœa, which would last a week or ten days, and would leave him in such a weak condition as to compel him to go to bed.

March 3.—Present condition: loss of appetite, cachectic, with yellow, anæmic complexion; pain over abdomen; bowels distended; has not had a movement since February 28, although the mother has given him several cathartic medicines. I told the mother to give the patient a sponge bath, night and morning; to commence with warm water, and gradually lower the temperature until the thermometer indicated 60° Fahr.; to give him milk and lime-water. Ordered the fluid extract of cascara sagrada in fifteen minim doses, in a little coffee, every three hours, till the bowels moved freely; also to take thirty minims of dialyzed iron three times a day.

5th.—Mother reports that the boy's bowels have moved three times since the morning of the 4th, the last time very freely. Told her to keep on as before, with the exception that she is to give of the cascara fifteen minims night and morning, and report to me in one week.

13th.—Patient called with his mother this morning at my office. He looks better, and says he feels better. The bowels have moved two or three times a day since last note; appetite improved; sleeps better at night; complained of the bad taste of the medicine, and asked me if I cannot give it in pill form. If I cannot, he will try and take it. Will not give it up, as he says it is the only thing that has helped him since he began to suffer from this trouble. I gave the cordial in place of the fluid extract.

April 2.—Met the patient on the street. His mother says he was never better; his bowels move once or twice each day; appetite is good; has not taken any of the medicine for the last week. I advised the mother to give him the medicine whenever he showed signs of a return of his old trouble.

Here was a case of constipation in a boy which had lasted nearly four years. He had taken various remedies and combinations with little or no success. I must confess I had but little faith in the preparation. The result, however, has been most gratifying, both to the parents of the child and to myself.

CASE II.—Harry O., male, aged ten months; has suffered from constipation ever since birth. The mother has tried several domestic remedies, with but little success. I told the mother to give him thirty minims of the cordial of cascara sagrada night and morning, every other day, until his bowels moved naturally. A few days later, the mother called at my office, and said that the medicine not only helped baby, but herself also, who was troubled with constipation.

CASE III.—Frank B., aged 50, called at my office July 6. He has been on a *spree* for the last week. He has been unable to keep anything on his stomach for the last two days. Bowels have not moved for nearly a week; muscles flabby and tremulous. Ordered fluid extract of cascara for his constipation, and ten minims each of tr. capsicum and tr. of nux vomica in Vichy water three times daily—the cascara to be taken night and morning.

July 7.—Patient says he is better; vomited the first two doses of the capsicum and nux vomica; has been able to retain the cascara. Bowels have not moved, although he has some pain. I told him to continue as before, and report to me in two or three days.

10th.—Patient called at my office this morning. He said that his bowels had moved freely on the afternoon of the 7th. Has been taking one dose of cascara daily since. I told him to omit the medicine as long as his bowels moved freely once a day, but to continue on with the nux vomica and capsicum for another week. Met patient a few days ago. He told me he never had taken such medicine; that both he and his wife had been great sufferers from constipation, but that the medicine had cured them completely.

CASE IV.—*May 3.*—Was sent for to see H. R., a young lady, aged 24, suffering from obstinate constipation, which had continued for a period of over two weeks. She had been treated previously to my visiting her by purgatives, which produced pain and vomiting, and a feeling of general uneasiness, together with ineffectual efforts to have an evacuation. Ordered milk and lime-water and one teaspoonful of cordial of cascara every three hours, until the bowels begin to move.

4th.—Patient's bowels have moved once since yesterday; is suffering some pain; has not vomited since last evening. Advised the same treatment to be continued as was ordered yesterday.

5th.—Patient says she feels better. Since the afternoon of the 4th, her bowels have moved four times, the last time very freely. I told the patient to omit the cascara as long as the bowels moved once daily, but to resume it whenever she went over one or two days without a movement.

A family, consisting of father, mother, and two daughters, one thirty, the other seventeen, all sufferers from constipation, took cascara with the best of results.

I might go on naming case after case, but I think the few above quoted are sufficient.

It is well to remember that the medicine is to be used in small doses, and special attention should be given to see that the preparation is reliable. I have been disappointed two or three times in the use of what proved to be poor preparations.

ON THE VALUE OF A LOTION OF SULPHIDE OF ZINC IN THE TREATMENT OF SUPERFICIAL LUPUS ERYTHEMATOSUS.[1]

BY LOUIS A. DUHRING, M.D.,
PROFESSOR OF THE DISEASES OF THE SKIN IN THE HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

I DESIRE to direct attention to the value of a certain zinc sulphide lotion in the treatment of some forms of lupus erythematosus. It may here be stated that I have found it useful in what may be termed the inflammatory superficial form of the disease, occurring either in discrete or in confluent patches of recent or of long duration. Where the morbid process has settled deeper in the cutaneous structures, and where there is but little tendency to variation from month to month, other more stimulating remedies will prove more serviceable. Every practitioner has doubtless encountered instances of this disease in which the usual, for the most part stimulating, remedies have been of no value. In the majority of these cases they will be found to be positively injurious, inflaming the skin, and causing the diseased areas to spread. Such has been my experience. Any new remedy or formula, therefore, which for these peculiar cases offers hope of relief, must prove welcome to both patient and physician. The striking good which has followed the use of this remedy in several cases that have recently been under my care induces me to present this note. I do not wish to claim for it any specific power over the disease, nor to say that it will cure. I merely wish to speak of it as a highly useful remedy, which in some cases has proved the only application that has at all benefited the disease. I was first led to prescribe it because of the service it had rendered in the treatment of seborrhœa of the face.

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[1] Read before the American Dermatological Association, at the Seventh Annual Meeting, August 29, 1883.

The lotion consists of equal parts of sulphate of zinc and sulphuret of potash, in the strength of from five to fifteen grains each to the ounce of water, together with the addition of a variable quantity of alcohol. Ether may also often be added with benefit. I am in the habit of using the following formula: Take of sulphate of zinc and sulphuret of potash each thirty grains; rose-water, three fluidounces and a half; alcohol, three fluidrachms. If this strength agree with the skin, the two active ingredients may be increased to the amount of a drachm each to four ounces of the fluid. More alcohol may also be used, to the extent of one ounce to three of water. A few minims of glycerine to the ounce may sometimes be added with advantage. The lotion, which contains a light-grayish, pulverulent sediment, should be shaken before using, and applied lightly to the part for from five to twenty minutes by means of a sponge or a rag mop, allowing the sediment to adhere to the surface. The immediate effect is usually cooling and soothing. The application may be repeated two or more times in the twenty-four hours. The skin should first be cleansed of scales by means of soap, the milder soaps sometimes proving more beneficial than the stronger soft soaps.

The following note by Dr. L. Wolff, pharmaceutical chemist, of Philadelphia, explains briefly the chemistry, as well as the best method of making the compound.

"When equal parts of zinc sulphate and potassium sulphide are mixed together in the presence of water, a double decomposition takes place, resulting in zinc sulphide, potassium sulphate, and precipitated sulphur. The zinc sulphide thus formed is a hydrate, and of a white, pulverulent appearance.

"When the two are to be combined in a lotion with water, they are best dissolved separately in half the prescribed quantity of water each, and then the two solutions poured together. When the liquid, however, consists of alcohol, or alcohol and ether, the two salts must be rubbed down fine first, whereupon a small quantity of water is added, just sufficient to allow the reaction to take place, which is known by the white appearance of the mass; the alcohol is then added, and lastly the ether.

"As there are five potassium sulphides, according to the quantity of sulphur in the combination, the results will vary as to the amount of precipitated sulphur present. Of these sulphides, the trisulphide and the pentasulphide are the most common. The potassa sulphurata of the United States and British Pharmacopœias are, according to their composition, principally trisulphides, and if these are employed, two equivalents of sulphur will be formed, as shown in the following formula:

"$K_2S_3+ZnSO_4+H_2O. = K_2SO_4+ZnS.H_2O+2S.$

"Again, if potassium pentasulphide is employed, an excess of four equivalents of sulphur would be precipitated, as follows:

"$K_2S_5+ZnSO_4+H_2O = K_2SO_4+ZnS.H_2O+4S.$"

I shall now briefly refer to three cases in which the beneficial effects of the lotion were striking:

About a year ago, Mr. W., aged 45, presented himself to me, exhibiting six or eight dull-red, chronically inflamed, slightly scaly, irregularly rounded, ill-defined patches of lupus erythematosus. The lesions were the size of peas and small beans, and were scattered over the face. They had existed eight months, and were subject to considerable variation. The patient had, at different times, been under the influence of arsenic, mercury, and iodide of potassium, and locally had used mercurial ointments—all without benefit. I prescribed an ointment of precipitated sulphur, one drachm to the ounce, which in a few days caused heat, and increased redness. Subsequently, tar ointment; oil of cade; liquor carbonis detergens; an ointment of calomel, thirty grains to the ounce; ointments of pyrogallic acid, thirty and sixty grains to the ounce; an ointment of iodoform; tincture of iodine, were all used, with the result that, in every instance, the disease was made worse. The zinc sulphide lotion was now ordered, and gave almost immediate relief, the skin, in the course of a few days, becoming paler and less scaly, accompanied by a decrease in the subjective symptoms. Improvement continued under the use of the remedy, but, as cure did not follow, other applications, including solution of chlorinated soda, acetic acid, lead and mercurial plaster, alcoholic solution of salicylic acid, carbolic acid, ether and rhigolene spray, and the use of the curette, were resorted to. All proved of not the least value, while many were injurious. The zinc sulphide lotion was the only remedy that in any degree favorably influenced the disease. Some of the lesions disappeared under its use, and all were benefited.

Another case, of the butterfly form of the disease, in a gentleman from Virginia, forty-six years of age, of two years' duration, who has lately been under treatment, was very markedly benefited by the remedy, other applications having previously failed to influence the disease favorably.

A third case may be mentioned, that of a man, aged 30, who was admitted to the clinic of the University of Pennsylvania a few months ago with an unusually extensive development of the disease of five years' duration, involving the greater part of the face. The erythematous element was marked, there being but very little sebaceous glandular involvement.

In the course of a week, a remarkable change for the better took place under the lotion; in three weeks the improvement was even more decided, so much so that the patch was broken up here and there, and apparently sound skin was in some places beginning to show itself.

AN EXTRAORDINARY CASE OF POPLITEAL ANEURISM.

By J. F. HEUSTIS, A.M., M.D.,
PROFESSOR OF SURGERY, MEDICAL COLLEGE OF ALABAMA, MOBILE.

FRANK R., a mulatto man, thirty-one years old, while lifting heavy timber, in June, 1882, felt something give way in his ham, and soon after noticed a small pulsating tumor (no larger than an English walnut, at first) in the popliteal space. In August (1882) it began to grow rapidly; and in another month became so large, and caused so much pain, that he had to give up work and take to his bed.

When he was first seen by me, in April, 1883, the tumor not only filled the popliteal space, but bulged so largely as to cause great tension. It was elastic, and presented to the touch an undecided feeling of fluctuation, but no pulsation on pressure or manipulation; but when the ear was applied to it, a strong, deep *bruit* was heard.

The tumor was so large and tense, that it was feared that, if ligature of the femoral artery were resorted to immediately, gangrene of the limb would result; and it was determined to apply compression for a while; not so much with the expectation of effecting a cure by it, but to establish a sufficient collateral circulation to maintain the vitality of the limb after ligature.

The means employed for keeping up compression were very simple and efficient. A small solid India-rubber ball, set into and screwed fast to a square block of wood, was placed upon the artery in Scarpa's triangle, and a small tin can (holding about a quart) partly filled with shot was set on it and held in place by the patient. The quantity of shot in the can was measured by the disappearance of the bruit. As soon as the pain caused by the pressure became severe the ball was moved a little higher or lower, and in this way continuous and steady pressure was kept up during the day, but left off at night. For seventeen days compression was kept up (and very seldom could any *bruit* be heard while the ball and shot were in place), but at the end of that time the blowing sound could be heard as distinctly as at first.

A few days after discontinuing compression, the femoral artery was tied at the apex of Scarpa's triangle, and immediately all sound disappeared. But there was no diminution in the size of the tumor, nor did it solidify. And although the man was easier than before the operation, he still suffered severe pain at times.

As the pain continued, the size of the tumor remained undiminished, and the feeling of fluctuation remained, the idea that the tumor had suppurated grew stronger, and it was determined to lay it open and turn out its contents.

Six weeks after the ligature of the femoral artery, the operation of cutting open the tumor was performed. To guard against hemorrhage, Esmarch's rubber cord was applied a little above the tumor, and an incision about three inches long was made into it. At first, only soft black coagulated blood was removed (which had given the sensation of elasticity and fluctuation), but the coagulæ became firmer and firmer in the deeper part, until they became as firm as flesh and strongly adherent. So strongly did the deepest layer adhere, here and there, it was thought best not to tear it away, for fear of hemorrhage or other damage. There was no sac, and it was evident that it was a diffused aneurism. Circumscribed at first, and becoming diffused by bursting, reaching up and filling all the space between the flexor tendons of the thigh above, and down to the bulge of the calf below; and the mass of blood, coagulating, effaced the distinctive sign of an ordinary aneurism, viz., expansive pulsation. The quantity of coagulated blood and solidified fibrin removed amounted to apparently a quart. After the clearing out of the whole popliteal space a great cavity was left reaching to the bone, which could be felt at its bottom. This was syringed out with carbolized water (ʒij to the Oj) and the rubber cord was removed. There was no hemorrhage. A large wisp of horsehair soaked in the same carbolized water was inserted, doubled on itself to the bottom of the cavity, and the ends left out for drainage. Over this a thick layer of marine lint and a bandage were applied.

No trouble of any kind followed the operation—no hemorrhage, inflammation, or suppuration. Contraction and healing went on rapidly, with as little disturbance as possible by repetition of dressings, they being changed only when soiled. The cavity was syringed at each change of dressing with a solution of permanganate of potash in chlorinated soda (ʒj potass. permang. dissolved in liq. sodæ chlor. ℥iv, and ℥ss of this diluted with water Oss at time of using), and oakum soaked in the same was substituted for the marine lint. This was kept up until the cavity and wound closed, which was in about a month. The man is now (October, 1883) quite well, and is at work. No thickening, induration, or enlargement marks the site of the formidable aneurism, and there is only a tender cicatrix where it was laid open to remind him of the danger he has passed.

The points of interest in this case are, 1st, the obscurity of the signs of aneurism, accounted for by its becoming diffused, and consequently having no sac, the large quantity of blood suddenly extravasated and coagulating acting as a buffer to prevent pulsation, and having no cavity to receive an expansive impulse. 2d, the same cause, viz., diffusion, preventing any benefit from compression. 3d, the absence of hemorrhage upon removal of all the coagulated blood and hardened fibrin filling up the hollow of the ham. 4th, the antiseptic treatment pursued kept the large cavity left from suppurating, and the system free from all disturbance, and conduced to progressive and painless healing; and, 5th and lastly, the great gain of time in restoring the limb to its full usefulness by the removal of the tumor, which was too large ever to have been absorbed, and would have continued to produce lameness by its presence.

MEDICAL PROGRESS.

PORRO OPERATIONS.—DR. BONI recently performed this operation at the St. Nicholas Hospital at Arezzo, for grave rachitic deformity, profuse hemorrhage coming on from rupture of the membranes and threatening life. The patient was in excellent condition on the seventeenth day after the operation.

PROF. ANTONIO MARTINO has also performed the operation quite recently, at the Maternity Hospital in Naples, for rachitic deformity. Both mother and child were saved.—*L'Indipendente*, Oct. 15, 1883.

REPORT OF THE GERMAN CHOLERA COMMISSION.—DR. ROBERT KOCH, Chief of the German Scientific Commission, has presented a preliminary report, dated Alexandria, September 17, 1883 (*Deutsche med. Wochenschr.*, October 17, and *Med. Times and Gazette*, October 20, 1883), in which he says:

"As the cholera epidemic was already rapidly subsiding when the Commission arrived in Egypt, it was hardly to be anticipated that that country would supply the material necessary to complete the investigation. And, moreover, as the period when an epidemic is on the wane is hardly the best suited for inquiry into its etiology, the original plan was changed, and it was decided to make only the preliminary researches in Egypt, with the view, in case the epidemic should extend to Syria, of rectifying them in places which had been but recently attacked by the cholera, and which would therefore be likely to afford a favorable basis for the inquiry.

"The first portion of this plan has hitherto been carried out with very satisfactory results, for, during its stay in Alexandria, the Commission has found opportunity to collect the material necessary for preliminary inquiry.

"The material so far used for the research has been obtained from twelve cholera patients, and from ten cadavers dead of the disease. Of the patients, nine were under observation in the Greek Hospital, two in the German, and one in the Arabian. In all cases the symptoms corresponded in every particular with those of true Asiatic cholera. Portions of the blood, of the vomit, and of the dejections of these patients were examined. As it very soon became evident that the blood was free from micro-organisms, and the vomited matters contained comparatively few, while in the dejections they were found in considerable numbers, the last-named were chiefly used in the inoculation experiments on animals.

"Although the quantity of post-mortem examinations was not large, we were happily favored in obtaining from them extremely valuable material for the preliminary inquiry. The autopsy was made in most cases immediately after death, or at the outside only a few hours later. The changes which putrefaction produces in the organs, and with especial rapidity in the bowel, and which render microscopical examination of these parts most extremely difficult, could under these circumstances be excluded with certainty. I would lay especial stress upon this fact, because in other countries it would be scarcely possible to obtain material so well adapted for microscopical examination. The pathological appearances, like the symptoms during life, left no doubt that we had to deal with true cholera, and not, as was maintained in several quarters, with a so-called choleriform or choleroid disease.

"No organized infective material could be demonstrated in the blood, or in those organs which, in the case of other infective diseases, are usually the seat of micro-parasites, viz., the lungs, spleen, kidneys, and liver. In some cases bacteria were found in the lungs, but these, as we saw from their peculiarities of form and position, had nothing to do with the peculiar disease-process, but had found their way into the lungs by the inspiration of ejecta from the stomach.

"The contents of the bowel and the dejections of the cholera patients contained extraordinary quantities of micro-organisms belonging to the most different varieties, none of which appeared in preponderating proportion. There was also an absence of other indications of a relationship to the disease-process.

"The bowel itself, on the contrary, gave most important results. In all the cases except one, which had died of a consecutive disease several weeks after recovery from cholera, bacteria of a definite form were found in the coats of the bowel. These bacteria are rod-shaped, and belong therefore to the bacilli; in size and shape they most nearly resemble the bacilli found in glanders. In those cases in which the bowel showed the slightest changes to the naked eye, the bacilli were found to have penetrated into the follicular glands of the mucous membrane, and had there given rise to very considerable irritation, as shown by the increase in the lumen of the gland, and the collection of many nucleated round cells in its interior. In many cases the bacilli had also penetrated behind the epithelium of the glands, and had proliferated between it and the basement membrane of the gland. They had, moreover, collected in considerable quantities on the surface of the villi, and had often penetrated into their substance. In the severe cases, which had been characterized by hemorrhagic infiltration of the intestinal mucous membrane, the bacilli were found in large numbers, and were not limited only to the interior of the follicular glands, but had passed into the surrounding tissues, into the deeper layers of the mucous membrane, and here and there even into the muscular coat of the bowel. The villi were also in such cases extensively invaded by the bacilli. The chief seat of these changes is the lower portion of the small intestine. Had not this investigation been made on quite recent cadavers, the result would have been of little or no value, for putrefaction is able to produce in the intestine exactly similar bacterial growths. A year ago I had found these same bacilli, with a similar distribution, in a choleraic bowel which I received direct from India; but I had not been able to attach any value to it on account of this very reason, for it was always possible that they might be confounded with post-mortem putrefactive changes. Now, however, that any error arising from putrefactive phenomena can be positively excluded, this earlier discovery, made in four different Indian cholera cases, acquires extraordinary value. Nor is it an unimportant fact that the agreement in the appearances of the bowel in Indian and Egyptian cholera furnishes a further proof of the identity of the two diseases.

"The number of cadavers examined is certainly small; but, as the bacilli were met with in all recent cases of cholera, while they were absent in the single case examined after the cessation of the cholera process, as well as in several other cases dead from other forms of disease, and examined with special regard to this point, there can be do doubt that they stand in some sort of relation to the cholera process. It cannot, however, as yet be concluded that they are the cause of the cholera. The relationship may be quite the reverse; it being quite as possible that the cholera process produces such changes in the intestinal mucous membrane as to admit the penetration into its tissues of a definite bacillus variety of the many parasitic bacteria which are constantly met with in the bowels. Which of these two hypotheses is the correct one—whether the infective process or the bacterial invasion is the primary event—can only be decided by attempting to isolate the bacteria obtained from the diseased tissues, to cultivate them, and then to reproduce the disease by inoculation experiments on animals. For this purpose it is absolutely necessary to have at one's disposal animals which are susceptible to the infective material in question. Hitherto, however, in spite of every endeavor, we have not succeeded, in an indisputable manner, in conveying cholera to animals.

"The most varied attempts were made, and the animals fed with the vomit, with the cholera dejections, and with the contents of the bowel obtained post-mortem—given in some cases quite fresh, in others after it had stood for a time in a cold or a warm room, in others again dried—but in no case did choleraic symptoms appear; on the contrary, the animals continued perfectly well. Besides this, the bacilli found in the contents of the bowels and in the intestinal walls were cultivated, and animals were fed, and in some cases inoculated, with the product. In some cases septic manifestations followed inoculation, but in none was cholera reproduced.

"That the *materies morbi* in an active form is very often contained in the dejections of cholera patients is shown by numerous facts, especially by the frequent infection of washerwomen who have had to wash the soiled linen. A case of this kind occurred in the Greek Hospital during the present epidemic—a washerwoman, who was exclusively employed on the linen of cholera patients, having sickened of the disease.

"It may therefore be regarded as certain that of the many substances used in the experiments, some at least must have contained infective material; and the fact that no result was obtained may be attributed either to the animals used being completely insusceptible of cholera, or to the proper mode of infection having yet to be discovered. The experiments shall be continued, and modified in both directions, but there is little prospect of any result being obtained with the material at present at our disposal.

"For it is not very probable that the reason of the failure of the infection experiments is to be found in those circumstances only. There is still a third explanation, for the correctness of which there is much to be said. It is well known that, in any given place attacked by cholera, the disease subsides long before all the inhabitants have been affected by it; and although the morbid material may be concluded to be distributed widely over the whole neighborhood, yet fewer and fewer people fall ill, and the epidemic dies out while many individuals still remain capable of infection. This phenomenon is only to be accounted for on the hypothesis that towards the end of the epidemic the infective material declines in activity, or at least becomes uncertain in its action. If, then, when the epidemic is declining, even human beings cease to be susceptible to the infection, it is hardly to be expected that the contrary should be the case with the animals experimented on, concerning whose susceptibility to cholera we as yet know nothing. In our researches only such subjects were available as were to be collected towards the end of the epidemic, and their incapability of conveying the infection was to be expected with more or less certainty. It still remains possible that, under favorable circumstances—*i. e.*, at the commencement of an epidemic—one might succeed in infecting animals, and by that means one would at once discover whether the bacilli which I have shown to exist in the intestinal mucous membrane are the true cause of cholera.

"Though, therefore, the results so far obtained by the Commission are still far from completely solving the problem, and though they have little practical value in the struggle against cholera, yet, considering the unfavorable circumstances, and the short duration of the investigation, they may be considered as very satisfactory. They completely answer the original aim of the inquiry, and, indeed, exceed it, inasmuch as the constant discovery of characteristic micro-organisms satisfies the first condition which must be fulfilled in the investigation of an infectious disease, and thus secure a definite goal for further research."

THE USE OF STRYCHNIA IN LABOR.—DR. EMILE DEGHILAGE recently used sulphate of strychnia in a case of uterine inertia in which all the usual remedies, friction, irritation of the cervix, injections, ergot, baths, etc., had failed, twenty-five minutes being sufficient to complete the labor, without any untoward circumstances. The pains of labor seemed to be diminished. The motor action of the drug on the muscular tissue of the uterus was very evident. The method of using it is very simple. Every ten minutes a granule containing gr. $\frac{1}{130}$ of sulphate of strychnia is given. As the head descends, the interval between the doses is increased. It should not be given until the cervix is dilated. It would seem that this medication is especially indicated in cases of uterine inertia, and the author claims that it is preferable to forceps-delivery in these cases, as not being liable to be followed by hemorrhage. Deghilage has had several cases in which the results were as satisfactory as in the case reported. —*Journ. de Med. de Paris*, October 13, 1883.

ETIOLOGY OF PUERPERAL INVERSION OF THE UTERUS. —In a paper by FUERST in the *Archiv für Gynäkologie*, Bd. xx. Hft. 3, the author describes the following as the conditions which predispose to the occurrence of inversion of the uterus in the puerperal state: 1. Feebleness of uterine action as a result of prolonged labor, cases in which delivery is often completed by the forceps. Out of one hundred and forty-eight cases collected by Lee, in twenty the labor was exceptionally slow, and in twenty-five very quick. 2. Attachment of the placenta to the fundus uteri. Considering the large part which want of tone in the uterine muscular fibre plays in producing, or rather in permitting, inversion of the organ, and having regard to the exceptional presence of this atony in primiparæ, Dr. Fürst is of opinion that the accident occurs more frequently in first labors than would be expected—a fact which he attributes to the greater frequency of fundal implantation of the placenta in these cases, as shown by the comparative rarity of placenta prævia in primiparæ. 3. Comparative rigidity of the vagina, opposing descent of the uterus in response to downward pressure on it, and thus favoring the production of inversion by a force acting on the fundus, this being a condition also met with chiefly in primiparæ. According to Schatz, the opposite state, laxity of the vagina, is one of the conditions which bring about inversion. 4. Narrowness of the vulva, preventing the easy exit of blood, so leading to distention of the uterus, in the sudden emptying of which inversion is likely to occur. Adhesion of the placenta is known to be frequently associated with inversion. Thus, out of Lee's one hundred and forty-eight cases, in sixty-seven the placenta was attached to the inverted organ, its manual removal being required in fifty-three of them.—*Medical Times and Gazette*, October 20, 1883.

ALTERATIONS OF THE VENA CAVA COMPLICATING CIRRHOSIS OF THE LIVER.—In cirrhosis of the liver, says DR. GIOVANNI, ascites appears before œdema or anasarca; in diseases of the heart the reverse is true, as a rule. There are, however, many exceptions in cases of cirrhosis. Œdema may appear in the lower extremities and in the whole lower half of the body, before the mechanical conditions producing intra-abdominal pressure are produced. It may appear in the first period of the affection, when its course is subacute, and marked abdominal symptoms are presented, as hepatic and intestinal pain, dyspepsia, vomiting, albuminuria, etc. Œdema may also be slow in making its appearance in cirrhosis whether before the symptoms of the hepatic affection are well defined or when it has already arrived at an advanced stage.

The intra-abdominal pressure may, on the one hand, be very considerable without there being a trace of anasarca, and, on the other hand, the œdema may be very strongly marked with a very small or even no abdominal pressure. The intra-abdominal pressure may be regarded then as the principal cause of the anasarca. It seems that the vena cava inferior in its passage between the lobes of the liver, ought necessarily to be a little obstructed during the period of shrinking of the organ, but this cannot be held as an explanation of the œdema which appears in the first periods of the affection.

According to Dr. Giovanni, the principal cause of this œdema is a special lesion of the inferior vena cava which, in these cases, is always found in a very marked state of hydræmia and dilatation, with well-defined lesions of peri- and endo-phlebitis, and with considerable thickening of the vein walls. When, on the contrary, no œdema appears during life, the vena cava is found in a perfectly normal state.—*Journal de Méd. de Paris*, October 13, 1883.

Arterial Lesions in Varicose Ulcers.—The difficulty of interpreting the relations of associated changes constitutes one of the most beneficial exercises for the development of a logical state of mind. Cornil and Ranvier have observed endarteritis frequently in the tissues of wounds, ulcers, and inflammations of the connective tissue. Some new investigations on varicose ulcers by MM. Arnozan and Boursier have revealed a remarkable degree of change in the arteries of the parts bounding the ulcer. In the smallest vessels an increase in thickness of the muscular coat has been measured. In the larger arteries areas of endarteritis were discovered together with hypertrophy of the muscular coat. What is the sequence of events in such a varicose ulcer? Is the ulceration dependent on the arterial disease, or are the vascular changes secondary in point of time to the ulceration? Are all the changes the result of increased venous congestion, or is there some other cause at the root of the whole of the alterations?—*Lancet*, October 20, 1883.

Catheter Fever.—In inaugurating the autumnal session of the Clinical Society of London, the President, Sir Andrew Clark asked from the surgical members of the Society information on one subject. In 1870 a man, who was otherwise in good health, consulted him for slight incontinence of urine. He consulted a specialist, who found his prostate enlarged and his bladder unable to empty itself, and advised him to use a catheter. Four days later he was taken ill; urine contained a little pus; pulse 120; temperature 100°. After two days the temperature rose higher, the pulse became more frequent, and in eight or nine days he died; the bladder was inflamed, and the kidneys were reported to be healthy. Since 1870 he had seen four or five such cases every year. He had not been able to gather sufficient information on this malady, which was not very uncommon. He was not alluding, of course, to the slight rigors after catheterism, but to a fever which generally ended fatally. The catheter had sometimes been tied in, and at others only passed occasionally.

The first thing that suggests itself, *The Lancet* (October 20, 1883) says, in considering these cases is the fact that they are not met with as a sequel to catheterism in men who have been previously free from disease of the urinary organs. The history always is that there has been long-standing stricture, or enlargement of the prostate, with atony of the bladder and chronic retention of urine, or calculus in the bladder; and that then, on some slight irritation of the urethra or bladder, such as is caused by the passage of a catheter, this serious chain of symptoms ensues. This undoubtedly throws great light on the pathology of the cases. The condition which is common to these various evils is a chronic interstitial inflammation of the kidney, especially of the cortex. The kidneys thus diseased may be little altered in their general appearance, but the capsule is a little less readily stripped off than usual, and leaves the surface of the organ irregular, and the cortex itself is abnormally pale. With the microscope, however, the change is at once to be detected in a cellular and fibrous intertubular infiltration and a granular condition of the epithelium. There may or there may not be superadded to this absorption of the pyramids the result of the pressure of urine dammed back in the pelvis of the kidney. When the cortex of the kidney is in this condition, a slight irritant is sometimes sufficient to light up an acute and fatal inflammation. This irritant may act directly upon the organ, as when the urine in the pelvis undergoes putrefaction; or indirectly in a reflex manner, as in the passage of a catheter or other instrument along the urethra, or in the performance of any operation upon the urinary tract. This acute interstitial nephritis tends to run on to suppuration, and causes lines and spots of pus or larger abscesses to be scattered through the cortex; the organ is at the same time swollen and greatly congested. The symptoms to which this acute affection gives rise are fever, usually attended with one or more rigors, nausea, often vomiting, dry brown tongue, loss of appetite, drowsiness, absence of spontaneous pain, though in some cases there are tenderness in one or other loin, failure in the pulse, and then, later on, cold clammy skin, deepening stupor, perhaps diarrhœa, coma, and death. Convulsions are very rare; œdema is absent; and as the urine is secreted in moderate quantity up to the end of life, the symptoms do not present a likeness to those familiar to physicians in Bright's disease. In the chronic form of the disease the urine is secreted in considerable quantity, is of low specific gravity, and only rarely contains a very small trace of albumen, and an occasional hyaline cast may be detected in it. In the acute form the urine is generally less abundant and more albuminous. But as there is often an added catarrh of the bladder, it is impossible to determine accurately the state of the urine as secreted by the kidneys. We would suggest, then, that the cases referred to by the President of the Clinical Society are those of chronic interstitial nephritis set up by chronic disease of the bladder, prostate, or urethra, in which an acute renal inflammation is induced by the passage of a catheter. The subject is a very important one, and now that attention has been called to it in so prominent a way, it is probable that the true nature of these cases will be more generally recognized.

Solution of Bromide of Arsenic in Diabetes.—Dr. Pekai, Clinical Assistant to Prof. Karanyi, of Buda-Pesth, has recently made a series of researches as to the value of bromide of arsenic in the treatment of diabetes. He was led to these experiments by the publication of several cases cured by Dr. Clément, of Frankfort-on-Main, in 1882. Dr. Pekai's results have been very satisfactory.

A young man, so feeble that he could scarcely go upstairs, was, after three months' treatment, enlisted as a soldier. Between February 15th and May 7th, his weight increased from one hundred and twenty to one hundred and forty pounds. The sugar which, on the first day, amounted to five per cent., had disappeared. The medicine was then discontinued, and the patient placed on gluten bread. At the beginning of the treatment gtt. iij of the medicine were placed in ℥j of water, and this taken in three doses. The quantity was increased by the addition of one drop every three days until gtt. x were taken daily. Before commencing this treatment the patient was placed on an exclusively animal diet, and the sugar diminished, but at the end of seventeen days there was still a large quantity of sugar. The medicine was then ordered, the flesh diet being kept up, and in eleven days the sugar had almost completely disappeared. In another case, the result, though not so brilliant, was very satisfactory. The solution is prepared as follows: grs. iss āā of arsenious acid and carbonate of potash are placed in a brine measurer (éprouvette); gtt. v of water are added, and treated until the liquid is limpid. Then add sufficient water to make ten grammes (ʒiiss by weight). Add then grs. iss of bromine and leave for twenty-four hours.—*Journ. de Méd. de Paris*, October 13, 1883.

Large Cystin Calculus—Removal by the Hypogastric Operation.—Mr. John Tremearne presented a record of this case to the Medical Society of Victoria on July 4th.

This calculus, measuring 2½ inches long, 1¾ inches broad, and 1 inch thick, with a circumference of over 7 inches, and a weight of 2½ oz. 54 grs., or 1254 grains, is composed of pure cystin, a form of stone not only rare, but, I believe, the largest of its kind that has ever been taken out of the bladder by operation. It was removed from a very tall, thin man, aged 47, who had been troubled for several years with dyspnœa and pleurodynia (?), as well as occasional sudden stoppage of urine whilst in the act of passing it, and on some occasions very small gravel had come away, resembling the calculus in color. Eighteen months previously he fractured his leg, and whilst lying on his back had no trouble whatever with the water. On rising from bed after the union of the bones he found great difficulty in micturition, and very soon the dyspnœa developed into severe spasmodic asthma. The water trouble increased, so that in November, 1882, he could not retain his urine beyond an hour, rarely that, and suffered much pain in the perineum and end of the penis. Every time previous to passing his urine he had half an hour of fearful forcing pain, and was obliged to rest on his knees and elbows until the bladder was emptied.

On November 27th, chloroform was administered, and an examination made. Directly the sound entered the bladder it struck a stone. A finger was introduced into the rectum, and the stone pushed forwards, so that it could be distinctly felt by pressing the fingers of the other hand on the abdomen just above the pubes. On introducing a lithotrite, instead of the sound, the size of the calculus was pretty accurately determined.

Three days afterward he was again put under chloroform, when the stone was successfully extracted by the supra-pubic or high operation. A tube was then put through the wound into the bladder, and fastened by tapes with long pieces of strapping around the abdomen. The tube was a large one, so that the bladder contracted around it and prevented extravasation. At the end of a week it was removed, and on the twelfth day urine commenced to pass through the urethra.

Within five weeks of the operation he gained thirty pounds in weight, and had apparently completely recovered his health.

In this case the large size of the tube introduced into the wound is particularly to be noticed. In the lateral operation I always adopt the same method (the vaginal pipe used with Higginson's enema apparatus answering the purpose very well), and leave the tube in the bladder usually four or five days.

In addition to preventing extravasation, it is a great help in checking secondary hemorrhage, should anything of the kind occur, and renders washing out the bladder easy.

Dr. Allen said that the largest cystin calculus noted by Coulson was in the University College Museum, and weighed 850 grains; another at Bartholomew's weighed 740 grains. Heath once exhibited nineteen taken from a single patient. Cystin calculi are formed originally in the kidney, the nucleus being sometimes uric acid, sometimes pure cystin. Their color on removal was usually honey yellow, becoming greenish on exposure; as a rule they were friable, and could be crushed without difficulty. With the present specimen the fingernail sufficed to make a white scratch; hence it would be interesting to know whether any attempt was made to crush it. Surely when the stone was once caught in the grasp of the lithotrite, a surgeon would be tempted to try the effect of a squeeze. Cystin is very rich in sulphur, being nearly related to the taurin of the bile. Such calculi often ran in families, and it would be well to learn if there was any hereditary predisposition in the present case.—*Austral. Med. Journ.*, July 15, 1883.

Inflammation of the Thyroid in Diphtheria.—Dr. Brieger reports two cases of inflammation of the thyroid gland occurring in the course of diphtheritis. The first patient was a young woman æt. eighteen years, who had no fever when first seen on the seventeenth day. Two days afterward, and while the diphtheritic membrane was still present, quite a high fever came on, with pain and swelling of the thyroid gland, and aphonia and dyspnœa. Antipyretic treatment seemed to have no good effect, but a good deal of relief was obtained by poulticing the swelling. Twenty days later Brieger made an incision at the point of fluctuation, and about one ounce and a half of pus was evacuated. The patient recovered under careful treatment.

In the second case, of a woman æt. thirty-two, the inflammatory process was aborted by energetic antipyretic treatment, and by leeches in the early stage. The thyroid inflammation subsided in both cases before the diphtheritic process. Brieger thinks that there is no doubt that the thyroiditis was the direct consequence of the invasion of the gland by the diphtheritic microbes.—*Centralbl. f. klin. Med.*, June 23, 1883.

Removal of Foreign Bodies from the Stomach.—To the case of the *homme à la fourchette* and the extraction of a spoon from the stomach of another patient, described in the *Semaine Médicale*, October 5, 1882, Dr. Hagens, of Dantzic, adds a third, recently described by him in several German medical journals. The operation, however, is not recent, for this third case was performed by Daniel Schwaben, "lithotomist and surgeon," at Dantzic, in the early part of the seventeenth century. A countryman, in endeavoring to produce vomiting for the relief of colic, was tickling his palate with a penknife, when he suddenly let go of the handle of that instrument, which was accidentally swallowed forthwith. Six weeks later, Schwaben made a very free incision through the abdominal walls and the anterior part of the stomach, and extracted the knife. The patient recovered, and was able, for several years afterwards, to work hard in the fields, never suffering from any local symptoms. The original manuscript description of this remarkable case is in the hands of Dr. Hagens. The surgeons of Dantzic and Königsberg appear to be the most dauntless pioneers of the desperate departments of operative surgery; last December we had occasion to refer to an unsuccessful case of excision of a phthisical lung by a surgeon practising in the former city.—*British Medical Journal*, October 20, 1883.

Interstitial Bacterial Nephritis in Children.—Dr. Ludwig Letzerich reports cases, seen during the spring and summer of this year, of a peculiar inflammation of the kidneys, epidemic and primary in children, and absolutely independent of any acute exanthem. The number of cases seen was twenty-four, the same symptoms being presented in all, and which showed the same fungi in the urine. Three children died of acute uræmia. The fungi found in the urine were carried through four successive cultivations, and then inoculated on rabbits. The rabbits were killed after a short time, and the same fungi found on microscopical examination. The fungi were somewhat similar to the bacilli of typhus; they were somewhat broader and larger, however, and showed no globular forms. They had a disposition to become elongated, and form threadlike bodies, in which spores, developed and in irregular masses, were seen lying at various distances apart. During the spore formation, the threadlike bodies could be seen separating into rods of different sizes.

In the interstitial tissue of the kidneys were found very large deposits of micrococci. The kidneys were markedly hyperæmic, and the stellate points were of a dark-red color, with black diagonal lines running through them. There were numbers of wandering cells in the interstitial tissue.—*Allg. wiener medizin. Zeitung*, October 9, 1883.

Mazanita.—Mazanita is a plant indigenous to California, and the leaves are the part of the bush used in the preparation of the fluid extract. This has an astringent and somewhat bitter taste. It is said to be an astringent tonic with a special action on the urinary organs, and has been recommended as a valuable agent in the treatment of gleet, vesical catarrh, incontinence of urine, etc.

Dr. H. W. Rand reports fourteen cases, twelve being cases of gonorrhœa and two of gleet. In about one-half of the cases there was improvement on doses of gtt. x–ʒiss three times a day. In other cases there was no perceptible improvement after a week's administration and the treatment was changed. The appetite seems to improve under the use of mazanita, and no gastric disturbances are produced. Although it is said to be astringent, it does not seem to cause constipation. Dr. Rand thinks that it is contraindicated in acute cystitis, and he would hesitate to use it in a case of irritable bladder. From his limited experience he thinks that it may be advantageously used during the stationary or decreasing stage of gonorrhœa, or in a long-standing gleet where the older and well-tried drugs had failed to relieve or had disturbed the stomach.—*Proc. of Med. Soc. of Kings Co.*, Nov. 1883.

Gartner's Ducts in Women.—In a paper published in a recent number of the *Archiv für Gynäkologie*, Dr. J. Kocks, of Bonn, describes certain fine canals which he has been able to find in about eighty per cent. of those women in whom he has searched for them, and which he believes to be the remains of Gartner's ducts. These canals open close to the posterior margin of the meatus urinarius, and a probe of one millimetre (about one twenty-fifth of an inch) in thickness can be passed into them for a distance of from half a centimetre to two centimetres (about one-fifth to four-fifths of an inch). Their orifices are often situated a little distance behind the urethral orifice, so that the canal has to be held open in order to see them; but generally, says Kocks, the openings are to be found at the summit of the little lips of mucous membrane which bound the posterior part of the meatus to right and left. They are generally both present, but one may be absent. Dr. Kocks compares their appearance to that of the lachrymal puncta. They run in the urethro-vaginal septum, and end blindly. They are found most easily in young adults. In the newly born they are relatively larger, but absolutely smaller than in adults. In old women they become obliterated or lessened in size. Dr. Kocks regards them as the homologues of the ejaculatory ducts in the male. In the following number of the same journal, Professor C. Böhm, of Vienna, writes to say that he, like Kocks, has been able to demonstrate the presence of these ducts; and, further, that he has seen cases of acute and chronic inflammation of them. Sometimes this inflammation is but part of a similar process affecting the vagina, vulva, and urethra, but sometimes it exists by itself. In the latter case, owing to the presence of redness and swelling of the meatus, discharge of pus from it, and pain on making water, the disease may be taken for gonorrhœa. From this it is to be diagnosed by everting the margins of the meatus, and noticing that the pus issues from the ducts in question. It is to be cured by applications of solid nitrate of silver to the inflamed ducts. Unless proper diagnosis is made, and this treatment employed, the disease may prove obstinate.—*Medical Times and Gazette*, October 20, 1883.

Therapy of Basedow's Disease.—From his personal experience in the treatment of seventy cases, and from the united and concordant observations of Von Dusch, Eulenberg, Meyer, Erb, and others, Chvostek regards the rational employment of galvanism as the most important item in the therapeusis of ophthalmic goitre.

As the best methods of administering the electricity in these cases he recommends the following: 1. The ascending constant current should be applied to the cervical sympathetic on either side, for one minute at most. 2. The ascending constant current should be applied to the spinal cord—the anode being placed about the fifth dorsal vertebra, and the cathode high up in the cervical region. 3. A constant current should be applied, at the longest for one minute, through the occiput, one pole being placed on each mastoid process, and in some cases also through the temples; the current should be so weak that the patient only feels the slightest sensation of burning. In some cases, also, local galvanization of the thyroid, for about four minutes, with a weak constant current, which is reversed at the end of each minute. If possible, the applications should be made every day. Chvostek obtained very good results, as a rule, a cure or marked improvement resulting even in the worst cases. Three patients died of anæmia or other complications.—*Central. f. klin. Med.*, June 23, 1883.

Unusual Malformation of Heart.—At the meeting of the Pathological Society of London, on October 16th, Dr. Howard Tooth showed the heart of a boy, æt. 6 years, who had been a patient of Dr. Gee's at St. Bartholomew's Hospital. The signs were marked cyanosis, especially of the lips and tongue, clubbing of the fingers and toes. There was bulging in the præcordial area, and a loud systolic murmur all over, but loudest at the apex. The child was admitted for enteric fever, and died from peritonitis. On autopsy, the characteristic lesions of enteric fever were found in the intestines. The heart weighed eight ounces and a half. The foramen ovale was not quite closed. The right ventricle was dilated, and the aorta arose from it, and went over to the root of the left lung as usual. The septum between the ventricles was deficient at the base, and the space thus formed was divided into two holes by the columnæ carneæ. The endocardium was thickened at the edge of this hole. The pulmonary artery, which was of fair size, and guarded by only two sigmoid cusps, also arose from the right ventricle. The ductus arteriosus was closed. The left auricle was smaller than the right. The left ventricle was small and had no vessel arising from it, and must therefore have propelled the blood contained in it into the right ventricle. He believed that this was a decidedly rare form of malformation of the heart. The existence of endocarditis was a further evidence of the well-known tendency to it in these cases.—*Med. Times and Gaz.*, October 20, 1883.

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SATURDAY, NOVEMBER 10, 1883.

AIR IN THE VEINS AS A CAUSE OF SUDDEN DEATH IN PUERPERAL WOMEN.

SUDDEN death of women soon after labor, while not a frequent event, is one so startling that inquiries into its cause, or causes, are of great importance. It may be that in some cases the event is unexplained, while in others, possibly, a wrong explanation is sometimes given.

Maurice Coste, in a monograph published in 1876, regards myocarditis as the most frequent cause of sudden death in the puerperal state. The late Dr. Charles D. Meigs attributed it to heart-clot, his first publication upon the subject being made in 1849 in the *Medical Examiner;* and he was not anticipated, as stated by Playfair in his *Midwifery*, by Paget.

The cases which Dr. Meigs has given in illustration of his views in his well-known and invaluable *Treatise*, are instances of rapid, rather than of sudden, death. None of them occurred immediately after labor; in some the interval between delivery and death was several days. Admitting pulmonary thrombosis, or heart-clot, as the cause of death occurring some days after labor, and occurring usually *rapidly*, rather than *suddenly*, is this the probable cause of death just after, or a few hours after, delivery? The *Medical Record* last year reported three cases of death of women after delivery, two within two hours, and one whose labor ended in the evening and who died the next morning; two of the deaths are attributed to pulmonary, and the other to cardiac embolism; in each the verification of an autopsy was not obtained.

The entrance of air into the uterine veins is probably, in some cases, the cause of sudden death occurring soon after delivery. In January of this year, Dr. Draper reported in *The Boston Medical and Surgical Journal*, two cases where instant death occurred from efforts to cause criminal abortion; post-mortem examination proved in each case the presence of air in the veins.

In a recent number of the *Wiener medizinische Wochenschrift*, Braun gives three fatal cases from the introduction of air into the uterine veins; in two of these cases the uterine douche was used, in one to produce abortion, in the other after delivery of twins, and the patients died in a very short time, one indeed within twenty minutes; post-mortem examination showed air in the uterine veins, in the ascending vena cava, and in the veins of the heart.

The third case was that of a woman who had been delivered lying upon her left side, and was then turned upon her back; massage was made upon the uterus, she gasped, and died in a few minutes. Braun suggests that in the change of position a volume of air entered the uterus, and the manipulation, instead of driving it outside, forced it into the uterine veins.

According to Dr. John Rose Cormack (*Prize Thesis*, Edinburgh, 1837), Brown Langrish was the first to prove that air injected into the jugular vein of a dog caused almost instant death; this was in a communication made to the Royal Society of London about 1746. Since that time many similar experiments have been made, not the least important of which were those of Magendie, which showed that it was not so much the quantity as the rapidity with which the air was introduced that brought immediate danger.

The first instance where air entering a vein during a surgical operation was the cause of sudden death occurred in 1818, at the Hôpital Saint-Antoine. Beauchene was extirpating a tumor from the right shoulder of a patient and a part of the clavicle was removed; as shown by the autopsy, a piece of the jugular vein, an inch in length, and comprising half its thickness, was cut away, when there was suddenly heard a *bruit* quite similar to that of air entering by a small opening the chest of a living animal. The patient uttered the pathetic words, *Mon sang tombe dans mon cœur, je suis mort;* he became pale, his head thrown back, eyes fixed, vision lost, pulse small, frequent, irregular, the body covered with a cold sweat, some convulsive movements, and in fifteen minutes was dead. Since that time similar cases of death have been observed both in Europe and in this country. In surgery there has come to be recognized what is called a dangerous zone, within which thoracic aspiration may cause the entrance of air into a wounded vein. Marey observes, in *La Circulation du Sang*, that this dangerous zone extends beyond the neck. Surgeons have met with cases of the entrance of air into the veins from a wound of the axillary, and even of the facial, near the angle of the jaw. In a foot-note Marey further states that thoracic aspiration may be exerted in the venous sinuses and in the canals of the cranial bones, and that Bernard has often spoken of the production of this accident in his vivisections, where the veins of the spine were opened. It is obvious that the dangerous zone is much larger than commonly thought, the bearing of this fact in explaining the spontaneous entrance of air into the uterine veins is also plain. In 1829, Legallois saw three cases of sudden death occur from the introduction of air into the uterine veins in animals upon whom he was studying the effect of abstinence and bleeding upon pregnancy.

Since these observations many obstetric authorities have held that the spontaneous entrance of air into the uterine veins may be the cause of sudden death in a woman after labor. Nevertheless, it is by no means a settled question. Hervieux, for example, in his *Traité Clinique et Pratique des Maladies Puerperales,* concludes his chapter upon the presence of gas in the heart and large vessels of lying-in women as follows:

1. The indisputable reality of cases of sudden death caused by the presence of gas in the circulatory system of lying-in women.

2. The impossibility of attributing the presence of these gases to a cadaveric effect, to a beginning putrefaction.

3. The identity chemically demonstrated of these with those of the blood, and the probability of their spontaneous development during life.

4. The necessity of carefully watching women who have had uterine hemorrhage, and although the introduction of air by the uterine veins is far from proved, it is the duty of the practitioner to resort to intra-uterine injections only with extreme reserve, strictly conforming to all the precepts of the art.

From what has been previously stated it does not seem improbable that thoracic aspiration may exert its force in drawing air into the uterine veins. It is to be remembered too that these veins in case of uterine relaxation after labor are in a condition, as to patency, similar to that of some other veins, which, when opened, admitted air with fatal result; they are so fastened to the muscular walls of the womb, through whose interspaces and meshes they pass, that without the firm contraction of those walls they cannot close, but are kept distended. Then, too, their great size at the end of pregnancy, is another condition to be borne in mind. Burton in his *New System of Midwifery,* published in 1751, observes that the uterine sinuses "in the ninth month of gestation are so large as to admit the end of the biggest finger, and their orifices that open into the cavity of the womb will, at the same time, admit the end of the little finger." And the late Dr. McClintock has stated that if the uterus be examined soon after delivery at the full term the majority of the orifices of the uterine veins at the site of the placenta will readily admit a goose-quill, and some will allow the little finger to penetrate them without laceration.

Various explanations have been given as to how air in the veins causes death. Marey accepts that of Mercier, published in 1839, which attributes the death to this, that the blood mixed with air becomes frothy, enters the pulmonary capillaries, and obstructs them. Physicists know that a capillary tube which readily permits the passage of air, or of water, offers a great resistance to a mixture of air and water; this mixture causes a series of bubbles separated by minute diaphragms of liquid. Poiseuille has shown, by a series of experiments, that such in fact is the cause of death when air mixed with blood has obliterated the capillaries of the lungs, the right heart remains gorged and cannot be emptied.

A recent number of the *Gazette Médicale de Nantes* contains an interesting paper upon this as a cause of sudden death in puerperal women. Its author, DR. ALFRED ROUXEAU, after a theoretical consideration of the question, from which he concludes that spontaneous penetration of air in the uterine sinuses may occur, next directs his attention to the clinical aspect of the subject. He states that many alleged cases had nothing in their symptoms or in autopsies justifying the diagnosis. In addition to these, there are some others reported so incompletely in an anatomico-pathological point of view that they do not carry complete conviction. But there are others finally which seem conclusive, such as those of Draper. He also refers to the case of Davidson, reported in *The Lancet,* June 9 of this year. In this case the patient had a perfectly natural labor, and there was no post-partum hemorrhage. Three-quarters of an hour after the labor she was taking some nourishment, when she suddenly fell back and died. At the post-mortem examination, two hours after death, the uterus was found empty, with large and somewhat distended veins; the right side of the heart contained a quantity of air, mixed and churned up with blood, which escaped in bubbles; the lungs were congested; all the other organs were healthy.

Dr. Rouxeau gives the following as the usual characteristics of the accident: Soon after delivery the patient is suddenly seized, often without appreciable cause, with anxiety, and trembling; she groans, or utters a cry of fright; becomes livid, and there is entire loss of consciousness; respiration, at first hurried and spasmodic, soon ceases; the pulse, small, rapid, in turn fails, a convulsion occurs, and the patient is dead.

As the symptoms are those of pulmonary embolism, too, the diagnosis, according to both Draper and Rouxeau, is determined by the time when the accidents occur. Embolism is a late accident, occurring usually during the second or third week, but not so the entrance of air into the uterine veins.

As to curative treatment, one can hardly do as Magendie did in the case of animals into whose veins he had injected air; withdraw it by means of a syringe, or as now would be done with an aspirator. Rouxeau observes that the treatment must be purely preventive; that is to say, one ought to hasten the retraction of the uterus after labor by hypogastric compression, ergot subcutaneously, and other measures.

Let us add a word to this treatment. When a patient is delivered of her child, while she is lying upon her side—and wherever rupture of the perineum is feared, such position is certainly the best one—let her be turned upon her back before the delivery of the placenta. A horizontal position should be strictly observed for at least several hours after labor. Intravaginal, and especially intrauterine injections, if the latter should be considered necessary, must be made most carefully to prevent the possible entrance of air with the fluid used. Deep inspirations should be avoided, for, as pointed out by Marey, they increase thoracic aspiration. Finally, the practitioner should remember that the accident may occur where there has been no unusual flow of blood after the delivery of the placenta; hemorrage was not its forerunner in some of the cases that have been reported.

PRELIMINARY REPORT OF THE GERMAN CHOLERA COMMISSION.

In another column will be found the full details of the preliminary report of Dr. Robert Koch, the Chief of the German Commission appointed to investigate the recent cholera outbreak in Egypt.

The Commission reached Alexandria after the disease had commenced to decline. Notwithstanding this, the blood, vomit, and dejecta of undoubted cholera cases were minutely studied. The blood was found free from micro-organisms, the vomited matters contained comparatively few, while they were quite numerous in the dejecta. These included the most different varieties, none of which seemed to preponderate or have any relationship to the disease-process.

Autopsies were made upon ten cadavers, either immediately after death or within a few hours, so that the post-mortem putrefactive changes which take place so quickly in the bowel were avoided. No organized infective material could be found in the blood or in those organs in which, in other infective diseases, micro-parasites are commonly found, viz., the liver, spleen, and kidneys. In some cases, bacteria were found in the lungs, but it was evident that they had nothing to do with the peculiar disease-process, but had found their way there by the inspiration of ejecta from the stomach.

But in the bowel, results, deemed most important, were met with. In all cases, except one which died of a consecutive disease several weeks after recovery from the cholera, bacteria of a definite form were found in the coats of the intestine—in the follicular glands, in which they had given rise to considerable irritation, behind the epithelium of the glands, between which and the basement membrane they had proliferated, and on the surface of the villi, and in its substance. In severe cases, characterized by hemorrhagic infiltration of the mucous membrane, the bacilli invaded, in large numbers, the deeper layers of the mucous membrane, and even the muscular coat. The chief seat of the invasion was the lower portion of the small intestine.

The bacteria were rod-shaped, and were, therefore, bacilli. They resembled in size and shape most nearly the bacilli of glanders. What is most interesting and important is that Koch had found these same bacilli, with a similar distribution, in a choleraic bowel which he had received directly from India. He had not, however, been able to attach any value to this discovery, because he had not been able to exclude the possibility of putrefactive changes. These were, however, excluded in the Egyptian cases, in which the autopsies were made promptly after death. Control investigations were made, and the intestines of persons dying of other causes were found not to contain the bacilli described.

In the crucial test concerning the specific nature of these bacilli, the Commissioners failed. They were unable, after repeated trial, to produce the disease in lower animals, including mice, dogs, monkeys, and chickens, by feeding the dejecta and vomited matters, or by inoculating the bacilli. In view of the acknowledged fact that the *materies morbi* of cholera lies in the dejecta, Koch attributes the failure to one of three circumstances—the insusceptibility of the animals experimented upon to cholera, or to the fact that the proper mode of infection has not yet been discovered, or that at the end of the epidemic the infection materialy declines in activity, or at least becomes uncertain in its action. He expressly states that we dare not, as yet, look upon these bacteria as the cause of cholera. On the other hand, they may be its consequences.

It may be admitted that the Commission in discovering a definite kind of bacillus in the intestines in cholera, has advanced us a step onward in our knowledge of the disease. It is gratifying to know that the request of the Commission, that they may be allowed to continue their investigations in India, has been granted, because the experience already gained, together with the skill in manipulation which Dr. Koch has acquired, gives us a combination of qualifications which may reasonably be expected to accomplish important results.

In the same report, Dr. Koch says he has examined, post-mortem, two cases of dysentery dying in Alexandria, and has found in the diseased bowel a peculiar parasite which does not belong to the group bacteria, and has not been heretofore described. He also examined an Arab who had died of malignant pustule of the intestine, probably contracted from Syrian sheep, of which large numbers are imported into Egypt. He also made autopsies upon three typical cases of bilious fever, and proposed to study this thoroughly. Examinations of the air and drinking water of Alexandria had also been made.

THE ORIGIN OF YELLOW FEVER AT PENSACOLA.

The report of the Naval Court of Inquiry upon the recent outbreak of yellow fever at the U. S. Navy Yard at Pensacola, which is given in full on another page of this journal, is a fresh illustration of the difficulties which are often met in attempts to trace the first steps of this disease in a community. The first cases are mistaken for something else, as appears to have been the case in this instance, and the investigation is undertaken too late to obtain positive and satisfactory evidence.

It will be observed that the Court indicates four possible sources of infection, but applies the term "probable" to only one of these, viz., the ballast derived from infected vessels during the two preceding years. The preservation of the specific cause of yellow fever in ballast, which has been exposed to the weather for several months through a winter season, would not seem to be a probable occurrence, in view of what are commonly supposed to be the effects of cold and of fresh air upon this cause. Nevertheless, there have been several outbreaks of yellow fever, both in ships and on shore, which have been attributed to infected ballast, chiefly because no other source could be considered possible, and although such an origin has never been proved in any case, it is a possibility that must always be considered.

That the specific cause of yellow fever may be preserved in connection with bedding, clothing, etc., if these are kept so that there is little change of air and not too low a temperature in their vicinity, there is little reason to doubt. There are a number of well-authenticated instances in which the poison has thus been preserved, and even transported for long distances, and has then produced its effects after an interval of several months. How long it may be thus preserved we do not know, the longest period known to us being less than a year, but, if the disease is due to a specific organism which multiplies outside the living body, and this is at present the most probable hypothesis, there seems no improbability that it may survive under such circumstances for several years as well as for several months. The suggestion of the Court that the recent outbreak may have been due to fomites preserved in the equipment storehouse since 1867 or 1874, or in the marine barracks since 1875 seems, however, barely within the limits of possibility.

The possibility of the spontaneous origin of the disease does not seem to have been considered at all by the Court, nor is anything said as to the sanitary condition of the Yard, the presence or absence of contaminated soil, etc.

One thing seems evident from the report, and that is, that the outbreak cannot be charged to any defect in the quarantine system of the present year, and, therefore, that this system cannot afford protection against such occurrences. We do not mean to imply by this that quarantine against yellow fever is useless, but only that it is by no means an infallible preventive.

It seems to us that the most certain and least expensive method which the Government could adopt to prevent yellow fever in its military and naval stations on the Gulf coast, would be to retain in them during the summer months the smallest possible force consistent with the preservation and care of government property and stores, and to have this force composed entirely of persons who have had the disease, and are therefore insusceptible to it.

WILLIAM HARVEY.

It is impossible to convey to a layman the feeling with which a physician, who honors his craft, regards the great man whose remains have been lately rescued from further decay and placed in the chapel above the vault where they rested so long unnoticed and almost forgotten. Standing, as every doctor should who goes to London, before the admirable portrait, by Jansen, in the College Hall—something of Harvey's true presence returns for any imaginative person. The face is grave, but gentle too, with a not unkindly cynicism in the lines about the mouth. The head, well-moulded, rises above watchful eyes of hazel, the hair is gray and scanty, the features elegant and slight like the form. It is not a face which disappoints you. It is not unworthy of the great thoughts which lay behind its shapely forehead, nor of the wise words which must have parted those lips. The hands crippled with gout can be seen in the picture; but they are finely formed and have the look of skilled use they ought to have had, to have been the artful servants of that marvellous brain to which God had given the power to unravel the mystery of the flow of blood through artery and vein.

It is pleasanter, somehow, to think of him as resting in the church where he was laid by the merchant brothers who were proud of his fame, and where he, no doubt, had often knelt, than in the crowded aisles of Westminster, to which at one time it was proposed to move him. The Harveys were new people in James the First's day; but getting money in trade built them a manor house in Essex, and laid their bones there, and in time carried thither the greater brother's remains.

To reach Hempstead, you drive from the quaint, old town of Saffron Walden, and climb a short hillside to a lonely little church, where the Harveys seem to possess all the monuments, and where the illustrious William is the single memory of any value.

He was, as some think, the greatest of all great physicians. We know what he did, and we can only grieve as we vainly guess how much more of what he did was lost forever when his house was sacked and his papers burned.

His manner of work was essentially modern and experimental. His speculations on his difficulties and results were humbly reverent, for he was of those who conceive that into the kingdom of knowledge, as into the Kingdom of Heaven, they who come with the submissive and ductile ways of childhood, will enter most easily.

One could wish that among those who bore the remains of Harvey to the new home which his medical brethren and heirs have provided, there had been some one out of the many who venerate his memory on this side of the ocean.

For surely with us this esteem for Harvey is deep and abiding, and we strongly feel that, as doctors, and as of English blood, we have a right beyond that of the German or the Frenchman to feel pride in the great thing he did, and to be thankful for the truth, the purity, and the manliness of him who did it. Strangely enough, his face, with its fine lines, is unlike the English visage of to-day, and is far more like some of the studious faces which haunt the elm shades of Harvard or Yale than those which are to be met among the monastic courts of his own Cambridge.

REVIEWS.

The Diseases of the Prostate, their Pathology and Treatment. By Sir Henry Thompson. Fifth edition. 8vo. pp. 157. Philadelphia: P. Blakiston, Son & Co., 1883.

French and German writers and readers have long enjoyed the advantage of unbound books, enabling author and student to come together when they otherwise could not. Happily this plan of book-making has, like so many other excellent notions of Europe, made its way across the Atlantic; and in this country we have a certain number of medical publications put in such cheap form that any one may own them. The best that can be done in this direction has not been attained yet, but it will be in time.

The book before us is an illustration of what we have been saying. Of its literary and scientific merits it would be superfluous to speak; these are too well known to need praise. But it is a new departure to have them offered, in paper cover, for less than a dollar, to all who would like to have them at hand. We can understand the pleasure that the distinguished author has taken in seeing the cheap English edition offered to the public, with especial reference to the necessities and conditions of students, and we are glad to see here this same edition in a shape which, while cheap, is not mean. The form and illustrations of the more costly editions are preserved, and the paper cover is stiff enough to be quite serviceable.

SOCIETY PROCEEDINGS.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, November 1, 1883.

The President, Fordyce Barker, M.D., LL.D., in the Chair.

The minutes of the last meeting were read by the Secretary, but before they were adopted Dr. John S. Adams read

A PROTEST

against the approval by the Academy of that portion of the minutes recording the adoption of the resolution of Dr. Loomis to rescind the resolutions of Dr. A. Flint, Jr., in regard to the admission of new members, which were adopted in April last, on the ground that the motion to rescind was clearly out of order, and should not have been permitted to come before the Academy. The reasons which he assigned for this opinion were the following:

That a question once put to a deliberative assembly could not again come up except through a motion for reconsideration, and, consequently, the motion to rescind was out of order.

That legislative bodies had the power to regulate their modes of procedure.

That Section 6 of the XXV. By-law of the Academy, referring to rules of order, read as follows: "After any question has been decided, except one of indefinite postponement, any two Fellows who voted in the majority may at the same or next stated meeting move for a reconsideration thereof; without which no discussion shall be allowed." At the same meeting at which Dr. Flint's resolutions were adopted, two Fellows who had voted with the majority in favor of them, moved their reconsideration, and the reconsideration being thus before the Academy, a motion was then passed that it should be postponed indefinitely.

That a motion to rescind was unparliamentary under these circumstances, and that if the ruling of the chair was allowed to be established as a precedent, resolutions of every kind could be adopted and rescinded by the Academy in the most trivial manner, unworthy of its dignity. That a motion to rescind could in any case only have been in order after a motion had been made to reconsider by two Fellows, in accordance with the provisions of Rule of Order No. 6, and that no such motion had been made.

For these reasons, Dr. Adams said, he regarded Dr. Loomis's motion as an evident violation of the By-laws, and submitted that the action of the Academy in regard to it was consequently null and void. In conclusion, he requested that the protest should be entered in full on the minutes.

On motion of Dr. Laurence Johnson, the protest was laid on the table; the Chair having stated before putting the motion, however, that, whether it was carried or not, the protest would be entered on the minutes in accordance with parliamentary usage. The minutes were then adopted.

Brief reports were made by the Corresponding Secretary, the Librarian, and the Committee on Admissions, and the latter recommended for resident membership the names of Drs. R. W. Taylor, C. H. Judson, R. W. Amidon, M. Josiah Roberts, and L. Emmet Holt, all of whom were elected Fellows during the evening.

The Chair requested that some member would hand him the name of a gentleman competent, on account of his familiarity with the deceased, to prepare a memoir of

THE LATE DR. CHARLES WRIGHT,

an honored Fellow of the Academy. At the time of his death, Dr. Barker said, he was engaged in preparing a very important paper, which was to have been read before the Academy on the twentieth of December, on the subject of "The Duration of Life after the Appearance of Albumen and of Sugar in the Urine, after Repeated Examinations." This paper would no doubt have been of extreme practical value, on account of the immense experience of Dr. Wright in connection with one of the largest life insurance companies in this country; and he had shown that he had carefully considered the subject in all its bearings by the fact that he had prepared a preface to it on the danger of fallacy in drawing inferences from medical statistics. The latter he had read to Dr. Barker during the past spring, and the excellence of its composition had strikingly reminded him of the style of Dr. John Forbes.

In regard to the late Dr. Lente, he remarked that he also had been preparing a paper for the Academy, which was to have been read on the seventeenth of May last, but on account of the precarious condition of his health, he had asked to have the time postponed until the autumn. This had accordingly been done, and the date that had been assigned to him was this very evening, November 1st. The subject which he had selected was "The Duration of Life as Affected by Climatic Influences in Consumption," and it certainly seemed a curious coincidence that two members who were engaged in preparing papers for the Academy at the time of their death should both have chosen titles commencing with the words, "The duration of life."

Dr. T. Herring Burchard then read a

MEMOIR OF THE LATE FREDERICK D. LENTE, M.D.,

which was an eloquent eulogy of the deceased. In many respects, he said, Dr. Lente's professional career was anomalous, as were the rare simplicity and purity of his personal character. Extreme conscientiousness was described as his distinguishing characteristic, and his feeling of professional accountability and keen sense of justice, even in the most trivial matters, were dwelt upon. At Saratoga, at one time, he had been treated with the most vicious intolerance, but he had borne the trial with admirable magnanimity, and had only wondered that such smallness and bigotry could be found in a profession like that of medicine. All that he did was done with rare thoroughness. His mind was a living thesaurus of information; yet, studious as he was, his investigations never led him into idle and profitless speculation. He was eminently practical, and as a diagnostician he was painstaking, thorough, and exact, always declining to express an immature opinion. As a therapeutist, his intimate acquaintance with the action of drugs, often tested by elaborate physiological researches, made him distinguished, and as a practitioner his skill in various departments of medicine was widely recognized. In the broadest sense of the word, he was "the good physician." He was an honored member of most of the medical societies, and was one of the founders of the American Academy of Medicine, as well as its first president. He had always been a distinguished contributor to medical literature, and perhaps the three most important of his papers were those on the treatment of intermittent fever by hypodermic injections of quinine, on the sedative influence of calomel, and on intrauterine medication. Dr. Lente was born at Newberne, North Carolina, in 1823, graduated at the University of that State, and, after having been an office-student of Dr. Alfred C. Post during his residence in the city, received the degree of Doctor of Medicine from the Medical Department of the New York University in 1849. For two years he served under Dr. Valentine Mott, at the New York Hospital, and then received the appointment of surgeon to the West Point Foundry, at Cold Spring, on the Hudson. There he achieved extraordinary success as a practitioner, and soon became known as a consulting physician and surgeon from New York to Albany. In 1871 he decided to remove to the city of New York, and he here received the appointment of Professor of Gynæcology and Diseases of Children at the University Medical School, as well as that of Assistant Surgeon to the Women's Hospital. On account of ill-health, however, he was obliged to return to the country in the following year, and he remained at Cold Spring until 1875. He was then compelled to make another change by reason of physical disability, and from that time began to practise at Palatha in the winter and Saratoga in the summer. He died at Cold Spring, on the 13th of October, in the sixtieth year of his age, and a wife and several children survive him.

The scientific paper of the evening was then read by Dr. Fessenden W. Otis, with the following title:

ON THE RAPID EVACUATION OF STONE FROM THE BLADDER AFTER CRUSHING; WITH PRESENTATION OF A NEW AND SIMPLIFIED EVACUATOR.

He commenced by saying that the revolution which had occurred within the last five years, in regard to lithotrity, might be said to be now complete. The method of Prof. Bigelow had been finally accepted in Europe as well as America, and the distinguished surgeon had found enthusiastic imitators everywhere. He then proceeded to quote from Dr. Bigelow's paper before the International Medical Congress, in London, in 1881, in which he gave a careful *résumé* of the past history of the subject and referred to his own achievements with characteristic modesty. From the time of Civiale up to 1878, there had been little change in the operation of lithotrity and the duration of each sitting was kept as brief as the skill of the surgeon, with the fear of cystitis always before him, could make it. Three minutes was about the time usually allowed for a sitting, and the use of anæsthetics was exceptional. Now, however, anæsthetics are almost universally employed, and the sittings were indefinitely prolonged, sometimes extending even more than three hours. Dr. Otis described the original evacuator of Sir Philip Crampton, devised in 1846, and its modification by Mr. Clover, of London, by the attachment of a glass receiver to the bulb; large drawings of these and the later instruments described having been hung upon the wall. Clover had subsequently made a further modification of the apparatus by the addition of a vertical chamber, and Dr. Bigelow cheerfully granted that his instrument was the only one in the possession of the profession of any value until the time that he brought forward his own. The reasons that Bigelow had achieved such extraordinary success were, because he understood the remarkable tolerance of the bladder and because he employed a large catheter for evacuation.

There was, however, a well-marked hiatus between Clover and Bigelow, and this Dr. Otis claimed to have filled himself by the results established by his researches in regard to the true size of the urethra. Up to the year 1874, all the standard authorities placed the normal calibre of the male urethra at twenty-one millimetres; but in that year by means of his urethrometer he had demonstrated indisputably that the normal calibre was thirty-two millimetres. In his earliest monograph Prof. Bigelow had stated that whether the views of Otis were adopted or not, there could be no doubt that the urethra could admit a much larger tube than that commonly attached to Clover's or the French instrument. Before the announcement of the result of his (Otis's) investigations in 1874 and 1875, no one had ever claimed that the urethra was as large as it was now universally conceded to be. At the International Medical Congress, Bigelow had declared that the small catheter of Clover's instrument had retarded progress for half a century; so that the hiatus was thus completely and satisfactorily filled.

Dr. Otis now related two cases occurring as long ago as March, 1876, and November, 1877, in one of which, although the patient was sixty-four years of age, one hour and ten minutes were consumed in the operation, while in the other it took one hour and a quarter. He felt sure that many other surgeons also had resorted to equally long sittings before the method of Bigelow was published. He claimed, therefore, that the latter did not discover the tolerance of the bladder under surgical procedure. Bigelow did much more than this, however. He utilized all the points that he had gained by study and experience, and thus achieved one of the most brilliant surgical triumphs of modern times.

The relation of the size of the urethra to the size of the penis, as first formulated by him (Otis) in his paper of 1875, was practically invariable, and deviation from this rule was abnormal. Before performing lithotrity it was his practice to put the urethra in the best possible condition, and to remove any obstructions that might exist, as the chief danger from the operation was the liability of injuring the deep portion of the urethra. The smallest evacuating tube that ought to be used was No. 27 of the French scale, and the largest, No. 32. Bigelow, however, advised that the tube should not be less than 25 millimetres, nor more than 31 millimetres. Dr. Otis then stated that with a tube of 30 millimetres he had evacuated 300 grains of crushed coral (which closely resembled the mixed calculus in its structure) from a bottle fitted up to represent the bladder, in 30 seconds, while with a No. 27 tube, only 3 millimetres smaller, he had evacuated only 180 grains in the same period of time. As a rule, the tube should be two or three sizes smaller than the calibre of the urethra.

Prof. Bigelow recommended the straight tube in preference to the curved. The objection to the straight catheter was the difficulty of introduction, especially if there was any prostatic enlargement; and in order to obviate this, Dr. Otis had constructed an instrument which was straight throughout its length, but had a small curve just at the extremity. Notwithstanding the fact that Bigelow had stated that the large catheter was the single agent to which progress in lithotrity was due, there was still another element of success, and that was the more powerful evacuating instrument now employed, and for this advance the profession was indebted to Prof. Bigelow. The objections to his first instrument were that it permitted the return of the *débris;* and also the too free passage of air into the bladder. Dr. Otis next described Sir Henry Thompson's instrument, devised in 1879; which was provided with a receiver into which the fragments dropped directly, and also with a metallic connecting-tube and stop-cock. The same objections were found in this, and in 1880 he introduced certain changes in it to prevent a return of the *débris* into the bladder. Thompson's chief aim was to secure as direct a route as possible from the bladder to the receiver.

Dr. Otis remarked, however, that for a long time he had used Bigelow's original instrument with much satisfaction, and in the present year Mr. Reginald Harrison, of Liverpool, had made the statement that, after trying several modifications, he had found none that he liked as well as this. After describing the various changes that Prof. Bigelow had made from time to time in his instrument, which had rendered it more perfect in its action, but also more complicated and expensive, he went on to say that in the early part of 1883 he had achieved a brilliant success in his latest evacuator, which he exhibited. In this, the route of the fragments between the bladder and the receiver, was greatly shortened, and the prevention of their return was accomplished by a strainer, which was prolonged to the centre of the bulb. Dr. Otis had used it in one case, and its action had appeared to him to be perfect. When describing Sir Henry Thompson's last apparatus, he remarked that the weight and expense of both these instruments seemed to him to be objections, and he had therefore devised one himself, which was considerably lighter, simpler, and less costly.

The apparatus consisted of a strong annealed glass bulb, two inches in diameter, into one side of which entered a tube connected with a rubber air-bulb, the tube projecting within the glass bulb, and extending nearly to its tip. Into the bulb, on the other side, the tube connecting with the evacuating catheter projected, and passed downward nearly to its bottom; while beneath it was a glass receiver attached by a strong bayonet-joint. The entrance of air into the bladder was cut off by means of a stop-cock. The glass-bulb could be filled either by pouring the water into it, or by exhausting the air from it, and then allowing it to fill itself. When it had been filled, the evacuating catheter was to be introduced into the bladder, and the removal of the fragments accomplished by making pressure on the air-bulb. Dr. Otis had prepared a bottle to represent the bladder, and had placed a quantity of crushed coral in it; when regular pressure was made by the hand on the air-bulb, the fragments of coral were seen to pass down into the vacuum without exhibiting the slightest tendency to return. This Dr. Otis explained to be due to the direction of the current, which was controlled by the position of the two orifices of the two tubes in the glass bulb, a dead point being produced at the top of the receiver.

The apparatus was perfectly simple, no strainer being required to prevent the return of fragments, as in Bigelow's instrument. The strainer was liable to become clogged with mucus, and Prof. Bigelow always insisted on the necessity of keeping it perfectly clean.

The price of Otis's instrument was just one-half that of Bigelow's.

Dr. Edward L. Keyes, being called upon by the Chair, remarked that, as far as he could see, very little discussion was possible about the admirable apparatus which had been exhibited this evening. In regard to one or two points touched upon in Dr. Otis's paper, however, he would like to say a few words. The tolerance of the bladder had certainly been known as long ago as Civiale's time, for he and others sometimes occupied as much as half an hour at a sitting. But as they could not evacuate, and as there was considerable danger of injuring the bladder with the instruments then employed, they found it advisable to shorten the sittings to three or four minutes. Civiale, while he shortened the sittings, also shortened the time between the sittings, and found that he could get better results in this way than by protracted sittings at greater intervals.

As to the size of the evacuating tube now used, this was undoubtedly due to the labors of Dr. Otis; but at the same time this was not, in his opinion, the main element in Bigelow's success, although the latter had distinctly stated this to be the case. Prof. Bigelow's brilliant achievement was, in fact, the result of the crystallization in his mind of all the ideas to which moden lithotrity owed its birth; and among the elements contributing to it, he thought, ought to be mentioned the more perfect instruments for crushing now in the hands of the surgeon. The operation could be performed perfectly well with a No. 12 English tube; though, of course, the larger the tube the shorter would be the time required for evacuation.

He never yet had had to cut a urethra as a preliminary to lithotrity, except just at the meatus; but if he were to meet with a case of stone in which there was organic stricture, he should much prefer external incision to the operation of crushing. In one case, where there was prostatic enlargement, he had operated very successfully, using a small evacuating tube; but the same patient had afterwards suffered from severe inflammation after having lithotrity performed by so careful an operator as Prof. Bigelow. This, he believed, was solely due to the larger tube which the latter had employed. The only authorities of high reputation who used the very large tubes were Otis, Bigelow, and Harrison, as most surgeons were apprehensive of causing injury to the urethra with them.

As to Dr. Otis's new instrument, he had never seen it until that morning; but he could only express himself as highly delighted with its efficiency, simplicity, cheapness, and portability. Among its chief advantages seemed to him to be the employment of air-pressure instead of water-pressure, and the construction of the bulb of glass so that the operator could see exactly what was going on at every stage of the operation. The small size of the bulb was certainly a great advantage in most respects, but there might be cases, he thought, in which more water than it could hold would be desirable. One other point occurred to him. If the fragments were of any size, there seemed to be no doubt that there would be no danger of their return into the bladder; but he did not know how this would be if there were a fine phosphatic dust, such as was found in certain instances.

Prof. Bigelow's latest apparatus he had used repeatedly, and with perfect satisfaction; but his first instrument he thought very objectionable, because it allowed so much frothy swashing in the bladder that the operator could not tell how he was progressing.

Dr. Otis, in replying to Dr. Keyes, remarked that it might perhaps be true that Sir Henry Thompson, as a rule, adhered to the old practice of using small tubes, but it was also a fact that he repeatedly employed a No. 30 instrument. Where there was prostatic enlargement, he (Dr. Otis) had invariably inculcated the advisability of using as small a catheter as would evacuate the fragments. Where there was either a contraction at the meatus, or a stricture more deeply seated, he always cut the urethra some little time before performing lithotrity, so that the wound might be entirely healed and the urethra in the best condition possible when the operation was done. The object in having the bulb of his instrument so small was on account of its greater portability and greater freedom from the danger of breaking. It could be readily inverted, so that water could be poured directly into the bulb when desirable.

At the conclusion of Dr. Otis's remarks the Academy adjourned.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Thursday Evening, Oct. 25, 1883.

The President, James Tyson, M.D., in the Chair.

Dr. Thos. J. Dunn, of West Chester, Pa., presented the report of the

AUTOPSY OF A CASE OF PLEURO-PNEUMONIA IN A COW.

The disease was of ten days' duration, and the prognosis being hopeless, the animal was killed. The rectal temperature was 104.8°, respiration 89, pulse 42, eyes sunken, ears drooped, back somewhat arched, great difficulty in walking, slight exertion causing dyspnœa and coughing. Respiration was jerky and shallow; there was slight muco-purulent coryza. Percussion gave absolute dulness over entire right side and lower part of left, while over the upper portions resonance was normal or slightly exaggerated. Auscultation: absence of vesicular murmur on right, and even bronchial breathing only could be detected over circumscribed areas; over upper part of left side, auscultatory signs normal; below, nothing could be heard.

Autopsy.—Much emaciation; muscular tissue of a deep mottled red, exuding on pressure much venous blood. The pleural cavities contained about six quarts of clear serum, with a few flakes of lymph. Both layers of the pleura were covered with from one to three inches of thick, tough, unorganized lymph, the membrane itself being rough and congested. The weight of the membrane was estimated to be twelve pounds. The left lung was crepitant throughout, but congested below; the right lung was completely carnified, while some of the largest bronchi were filled with plastic plugs, which, on removal, left the mucous membrane rough and swollen. The other bronchi had their mucous membrane swollen and congested. Frothy muco-pus exuded from the cut lung surface when scraped. The solidified lung was estimated to weigh fifty pounds, the normal being three and a half pounds. Right heart was dilated and its tissue soft; as the animal had been bled after death, the vessels were nearly empty. Other organs healthy. Microscopical examination of the blood (× 680 to × 1,000) from the heart showed innumerable globular or oval micrococci from 0.35 to 0.5 mm. They were rarely grouped in colonies, more frequently in pairs, but usually single. Lung scrapings showed granular cells, shreds of tissue, and innumerable micrococci. The cells contained bodies resembling the micrococci of the serum; they were insoluble in ether, neither did they stain with aniline-green nor hæmatoxylon, whether in an acid or alkaline solution, while the remainder of the cell readily colored. Aided by Dr. Martin, of West Chester (who assisted him in the microscopical examinations detailed), he has commenced culture experiments which in one instance have succeeded.

The President said that he had seen a similar case sixteen years ago, but at that date attention was not paid to the presence or absence of micrococci.

Dr. H. M. Fisher presented the specimens from

A CASE OF TYPHOID FEVER, WITH ABORTION IN THE THIRD MONTH; DEATH; ULCERATION OF PEYER'S PATCHES, AND HIGHLY FATTY KIDNEYS.

L. K., æt. 43, married, German, was admitted to the Episcopal Hospital September 15, 1883.

The following notes were taken by Dr. George M. Boyd, Resident Physician: She stated, on admission, that she had been sick two weeks, that the trouble began with general lassitude and headache. Her bowels had been loose, and she had passed blood in small quantities. The abdomen was somewhat tympanitic on percussion, and there was pain complained of on pressure over the right iliac fossa, and gurgling on pressure over this region. The patient seemed rather unusually prostrated; tongue coated with brownish fur and very dry.

Sept. 17.—Evening temperature, 103°; bowels loose. She complains of pain in both lumbar regions, apparently along the course of the colon.

19th.—Heart's action weak, but otherwise patient seems to be doing well.

20th.—Temperature 103°. Heart very feeble and irregular. Patient presents all the symptoms of profound shock. Menstruation stated to have come on suddenly this morning, with much loss of blood. Vaginal examination reveals widely open os and large uterus. Several large clots were removed, but failed to remove placenta, which was tightly adherent. Hot-water injections and ergot were ordered, with alcoholic stimulants, but no reaction took place, and the patient died at 9 o'clock the same evening.

The post-mortem examination revealed numerous enlarged and ulcerated Peyer's patches in the lower portion of the ilium; inflammation also of the solitary glands and so-called mesenteric glands. The uterus seemed about the size of a uterus at the beginning or middle of the third month of pregnancy.

The kidneys were highly fatty.

N. B.—An embryo, it seems, had been passed, but was unfortunately thrown away by the nurse with the other discharges.

Dr. Woodbury stated that he had a case of profuse bleeding, due apparently to menstruation, in the course of typhoid fever. This is contrary to what usually occurs, suppression of the menses being more common.

Dr. Edwards said that in one of his cases, of typhoid fever during pregnancy, the woman recovered, and was delivered of twins.

Dr. Fisher related another case in which the woman died when at full term. In articulo mortis she gave birth to a child that looked like a seven months' child. Its growth seemed to have been delayed by the presence of the disease.

Dr. Dunn said that he had a case of delivery accompanying the development of scarlet fever. The woman recovered.

Dr. Seiler read a paper on the

PATHOLOGY OF PHTHISIS AND ITS LARYNGEAL COMPLICATIONS,

in which he gave his views regarding the pathology of tuberculosis, and of phthisis, and of the laryngeal complications of the two diseases. He defined tuberculosis as an auto-infectious disease, manifesting itself primarily by the production of minute neoplasms, called miliary tubercles, which rapidly undergo retrograde metamorphosis ending in caseation, being due to the dissemination of infectious material throughout the lymph channels. This infectious material consists in cheesy matter due to scrofulous inflammation which may remain encapsulated for a long period. He then described the histological characteristics of tubercles, and showed how they could produce consolidation of the lung tissue by exciting secondary inflammation.

He then entered upon the consideration of the disease known as phthisis, and gave the following definition of it: Phthisis is a progressive consolidation of the lung tissue due to a more or less localized inflammation affecting primarily the apices, and undergoing retrograde metamorphosis; it is an inflammatory disease. He then gave a description of the pathological processes as they are observed in the lung tissue during the progress of the disease, and gave it as his opinion that the different forms and stages of phthisis, as they are described by many authors, are merely differences in the severity and extent of the ulcerative process. As etiological factors, he mentioned the various causes which produce a lowering of the vitality of the general system, thereby producing a predisposition on the part of the respiratory organs to chronic inflammation; among others he named hereditary peripheral nerve irritation, hypertrophic nasal catarrh, insufficient aeration of the blood, etc.

An elevation of the vitality of the system at large would prevent an outbreak of the disease, and lead to recovery in cases where not too much lung tissue had been destroyed. This elevation was to be produced by proper feeding and healthful exercise in the fresh air, more than by the exhibition of drugs. On the other hand, tuberculosis was always fatal and treatment was of no avail; but a great deal could be done to prevent the formation of the initial lesion of cheesy deposit by elevating the system of scrofulous patients early in life, thus preventing the outbreak of tuberculosis later. The laryngeal complications of both diseases were then considered in detail, and their differences pointed out. According to the reader, the laryngeal lesions never appear prior to the lung disease in phthisis; they are characterized by peculiar pallor of the mucous membrane; the tumefaction generally affects the posterior portion of the organ, and the ulcerations are shallow and have a tendency to spread over the surface; and tubercular or cheesy deposits are never found in the tissues of the larynx in phthisis. In tuberculosis, on the other hand, tubercular deposits have been found in the larynx prior to the lung implication; the mucous membrane is of a livid-red color; the tumefactions are more commonly observed in the anterior portions of the larynx, and the ulcerations are deeper with raised edges and often extensive destruction of tissue.

The paper closed with the remark that the indiscriminate use of the terms phthisis and tuberculosis, when speaking of lung disease, in our literature, was calculated to mislead the student, and make careful investigation into the pathology and etiology of these diseases extremely difficult, if not impossible.

Dr. J. C. Wilson said that he had listened with interest to the reading of the paper. The field covered by the writer is too great to permit the points to be discussed in detail. Two points, however, appeared to warrant comment. First, Dr. Seiler had several times used the expression, "tubercular material not derived from the exterior." If he had understood the paper aright, Dr. Seiler had not indicated his views as to the nature and source of this "tuberculous material." Does he follow the older doctrine—that of Beebe? Or has he some new opinion as to the etiology of tubercle? Secondly, Dr. Seiler failed to make clear his means of recognizing tubercle, either clinically or in the laboratory. It would be of interest to have the writer's views upon this vexed question. In a recent work, Hamilton, of Aberdeen, again seeks to establish a histological criterion for tubercle—the presence of giant-cells under a peculiar arrangement. This pathologist points out two modes of degeneration for tubercle: 1. Caseous; 2. Fibrous. To the latter, Dr. Seiler makes no allusion.

He thought, further, that the author of the paper had scarcely emphasized with sufficient force the presence of tubercle among the lesions in the various forms of phthisis as seen in post-mortem examinations.

He heartily concurred in the hopeful view as to the curability of certain forms of chronic lung disease when treatment is instituted at an early period. Nothing has exerted a more unfavorable influence upon the therapeutics of such diseases than the false view that the constitutional tubercular diathesis invariably antedates the local lesions of pulmonary consumption.

Dr. F. P. Henry remarked that he was not inclined to draw so broad a line of distinction between that form of pulmonary disease in which miliary nodules predominate and that in which the deposit is in larger caseous masses. Like Dr. Seiler, he was by no means convinced of the primary importance of the bacillus as a cause of tuberculosis; but was inclined, however, to attribute to it a prominent part in the production of the secondary symptoms of phthisis, those of systemic infection, which are largely septic in character. The symptoms of interference with oxidation, caused by extensive destruction of pulmonary tissue, are subordinate to those of systemic infection caused by absorption of the contents of cavities. The presence of the bacillus in the contents of these cavities is indispensable to the production of changes capable of producing this systemic infection. A small, ulcerating cavity communicating with the absorbent vessels is more disastrous in its effects than a larger cavity shut out from the absorbents by a lining membrane or wall of fibroid tissue. He understood Dr. Seiler to deny the existence of the giant-cell, and to make the statement that cross sections of blood- and lymph-vessels have been mistaken for it. Dr. Henry did not agree with him in this view, but thought the irregular contour of the giant-cell and its granular protoplasm were sufficiently characteristic.

Additonal evidence of the existence of this cell was furnished by the experiment of introducing beneath the skin of an animal, two thin glass covers fastened together. In the interspace of the glasses giant cells have been found, and in such an experiment there can be no cross-section of vessels. Dr. Seiler had several times referred to what is known in this city, and elsewhere, as Formad's theory of tuberculosis, which is, that in certain animals predisposed to phthisis, and presumably in some human beings, the lymph spaces are abnormally small, or, in other words, that in a given area of tissue there is to be found a greater number of endothelial cells than in non-strumous animals. Dr. Henry did not think this theory should be so extensively quoted until some more serious attempt had been made to establish or refute it. This might, he thought, be readily done by counting the cells in a given area of the tissue of strumous animals, and comparing their number with that contained in the same area of tissue of non-strumous animals. He did not think any greater difficulty would be met with in this attempt than has been successfully encountered in the enumeration of the blood cells.

Dr. Bruen said that he believed in a hopeful prognosis in the early stages of many varieties of phthisis, even when the process of phthisis was advanced; the management of cases was more successful when the lesions are localized; less advanced lesions are more grave when the lesions are widely disseminated. Dr. Bruen thought that it had been proved that phthisis could be produced by inhalation of inorganic irritating particles, especially if there was inherited predisposition to phthisis, or an artificially damaged constitution. May not bacterial elements be among the irritants capable of developing phthisis when inspired in larger numbers? and he thought they might be even more capable of creating damage than inorganic materials, because they possess the power of proliferation. Dr. Bruen agreed with Dr. Seiler in his views in the main, and considered his paper most instructive and interesting.

Dr. Mills thought it worth while to note the frequent occurrence of tuberculosis among those afflicted with chronic nervous and mental diseases. At the institutions for the feeble-minded and insane, phthisis or tuberculosis is a common cause of death. This fact, he thought, would lend support to the views of Formad rather than to those of Koch.

Dr. J. T. Eskridge had observed that some who had participated in the discussion referred to the views of the pathology of tuberculosis expressed in the paper of the evening, and to those entertained by Dr. Formad, in order to prove the same thing. He regarded the theories of each of these men as widely different. If tuberculosis is the result of inflammation in a person whose lymph-channels are abnormally narrow, as claimed by the latter, he could not see that phthisis differed from tuberculosis, as maintained by the former. In regard to tuberculosis being frequently developed in chronic diseases of the brain and cord throwing light on the pathology of the former, he thought the association of these diseases proved nothing more than that a prolonged period of lowered functions of the body was a favorable condititіon for the development of tuberculosis. He confessed that he did not know what to believe with reference to the pathology of tuberculosis; enough, to his mind, had not been proved to firmly establish any theory yet advanced so that it might be accepted as positive fact. Dr. Eskridge agreed with Dr. Shakespeare in demanding more pathological investigation following the clinical observation of the disease, before he could accept any view as positive of the pathology of tuberculosis. Dr. Eskridge called attention to the fact that many of the best clinical observers of large experience, such as Flint, DaCosta, and Hughes Bennett, considered tuberculosis and phthisis to be identical.

Dr. Davis asked Dr. Seiler if he taught that tubercle was caused by a caseous focus? He was answered, yes. It is important to know whether this is the case or not, as the German surgeons excise caseous glands not so much for the deformity they produce, as to obviate the liability to general infection. Would Dr. Seiler sanction this practice? As regards the possibility of cure, he believed with Koster, Billroth, and König, that tubercle is a local affection and not a general disease. He has seen tuberculosis as marked in the knee as in the lung, the miliary tubercles being within an eighth or quarter of an inch of each other. He has also seen tumor albus of the knee recover without operation. If the tuberculosis can get well in the knee, he believes that it can, in some cases, get well in the lung also.

THE PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, October 24, 1883.

The President, William M. Welch, M.D., in the Chair.

Dr. James Farrar Stone presented a paper on

THE RELATION OF PHYSICIANS TO LIFE INSURANCE.

In the year 1859, he said, the regular life insurance companies of the United States, reporting to the New

York Insurance Department, had in force, in round numbers, 50,000 policies, representing a total insurance of $140,000,000. At the close of 1882, according to the same authority, the number of policies in existence exceeded 660,000, insuring more than $1,600,000,000. During last year, these companies, thirty in number, issued about 92,000 new policies, and distributed among their policy-holders or their representatives over $52,000,000—an average of almost $150,000 for every day of the year, Sundays included. Nor do these figures, large as they are, fairly measure the growth and extent of this business.

Within the period covered by these statistics, and not included in them, new forms and methods, calculated to bring insurance to the notice and within the reach of all classes in the community, have been devised and introduced with such success, as to make it altogether safe to assert that but a moiety of the volume of business, and a yet smaller proportion of the persons carrying insurance of some sort, is represented in the returns quoted above.

Life insurance was, in its origin, essentially an outgrowth of medical science. Whose brain it was that first conceived the thought, we do not know, but we do know that until the law of the absolute uniformity in the average duration of life, when large numbers are compared, was demonstrated, life insurance, as a science or a business, was an impossibility. The mortuary records and observations which furnished the data from which this law, the corner-stone of life insurance, was at length deduced, were mainly the result of the labors of the medical profession, and life insurance is still dependent upon medical aid for its safe existence and healthy growth.

Important contributions to vital statistics may be confidently anticipated from the rapidly accumulating mortuary experience of the companies. These records are kept with a care and accuracy unattainable elsewhere, and the deductions drawn therefrom will be correspondingly valuable.

Already it has been demonstrated that the average longevity in civilized countries is gradually rising. The experience of American companies seems to be slightly more favorable than the British, but it would be premature, as yet, to conclude that this is due to greater longevity in the community at large. Indications point to a slight decrease in the ratio of deaths from phthisis, and an increase in those due to kidney affections. That greater results have not already been reached is due to the brief time and limited experience covered by the records. These observations must throw light upon such questions as the greatest duration of human life, the geographical distribution of diseases, the effects of race, occupation, hereditary tendencies, and physical condition and configuration, and many kindred topics.

The special relations the physician assumes in becoming the medical examiner of a company, and his duties in that capacity, are at once the most practical and difficult parts of my subject.

Regarding the ethical relations of the position, it is evident that he owes paramount allegiance to the interests of the company whose officer he is. The well-being of the company—and by this term is not meant any corporation, but the whole membership constituting it—demands the maintenance of a longevity at least equal to that of the general population. Under present conditions, those seeking insurance fall below that standard. This adverse selection the medical officer is appointed to prevent. To fulfil this trust he must weigh every candidate in the scales of physical fitness alone, and be blind to every alien consideration whatsoever. But while thus loyal to the company, he must not lightly regard the claims of the applicant. To deny to any man the privilege of insurance is never a trifling thing, and it may be a serious and lasting injury.

How shall we decide, in view of the conflicting claims of the applicant and company, those border-line cases which so often arise? But one reply can be given. When doubt remains after full investigation, always give the company the benefit of the doubt. When compelled to deny an application for insurance, the examiner may occasionally render a more than compensating service to the candidate, by revealing his timely discovery of an unsuspected disease, amenable to treatment in its early stage. Many valuable lives have thus been saved, or prolonged, and it is worthy of mention as an incidental benefit of insurance examinations.

The relation of the examiner to the agent ought to be, and generally is, one of coöperation, yet of absolute independence. The aim, the true interests of both are identical, however they may sometimes seem to clash. But the motives that sway the one must never be allowed to influence the judgment of the other.

How can the medical examiner best discharge the practical duties of his office? The first and obvious answer is, by having a clear conception of what those duties are. In general, they may be comprised in the obligation to recommend none but healthy lives for insurance. But inasmuch as perfect health is a condition most rarely, if ever, met with in actual experience, it is evident that something less than this ideal standard must serve for his working rule. What shall it be? Some companies have solved this problem by establishing a sliding scale, according to which all risks are graded into classes, extra good, good, fair or average, and poor. Others encourage the examiner to report mainly on the physical condition and habits, leaving points of hereditary influences, and other general questions, to be decided at the home office. This plan relieves the local examiner of a certain amount of responsibility, and has the apparent advantage of referring to experts the weighing of points, upon which the average medical man has had but little experience. As the whole application comes under the review of the medical board in any event, it may be questioned whether the judgment formed from personal contact, in view of *all* the circumstances affecting the risk, is not of more value to the company than one with certain elements ignored.

I cannot do better, just here, than to quote the formal question, closing the medical examiner's certificate on the application of a prominent company: "Is the person, in your opinion, as good a life for insurance as the average of persons of *the same age, who are of sound constitution, in good health, and whose family history is good*, and do you, acting in the interest of the company, advise the acceptance of the risk?"

To my mind, this is the most fair, logical, and comprehensive statement of the object of the examiner's work with which I am acquainted. To answer the question fairly requires a balancing of all circumstances affecting the life favorably and unfavorably, and an unqualified decision upon the relation of the risk to the standard assumed. With a clear conception of the purpose of his examination, the physician will do well to remember that the applicant for insurance stands in a relation the very reverse of that occupied by a patient. The latter comes for relief, and is ready to aid, so far as he can, in the discovery of his ailment. The former approaches with the assumption of health, and the examiner must detect, unaided, any fallacies in that assumption. The task is, not infrequently, made vastly more difficult by the deliberate purpose to gain the end by deceit.

One of the knottiest questions to answer satisfactorily, in many instances, is that respecting the applicant's use of liquor and narcotics. The importance of the information sought is commensurate with the difficulty of obtaining it. According to Neisson's statistics, as quoted in *Parke's Hygiene*, "In intemperate persons, the mortality at twenty-one to thirty years of age is five times that of the temperate; from thirty to forty it is four times as great, becoming gradually less with advancing age."

But what is a temperate use? To quote from an English writer on insurance: "Whatever may be our doubts as to the injurious effects of small quantities of narcotics and stimulants upon the system, we should have little hesitation in declaring that when they are long used, and in large quantities, they must, in the vast majority of cases, impair health and shorten life, so that a life so exposed needs higher rates."

Practically, then, it is not sufficient to trust to general statements, but it is important to learn just how often and in what quantities stimulants are taken. With all possible care, the examiner will sometimes be most egregiously deceived.

The family history presents difficulties, often insuperable, in the lack of knowledge of the causes of death among the immediate relatives. When we push our inquiries a generation further back, it is remarkable how little the average citizen can tell of his grandparents. Yet much may be learned or excluded by persevering inquiry. It is worth the effort if it be true, as Ribot asserts, that "Longevity depends far less on race, climate, profession, mode of life, or food, than on hereditary transmission, . . . and will assert itself above many influences generally fatal to a high average duration of life."

It is in the physical examination that the best work of the examiner is demanded. Closeness of observation, system, thoroughness, accuracy, must be his watchwords. He must insist on favorable surroundings, quiet and privacy, on time sufficient for examination without haste, on repeated interviews when needed, and, above all, on entire freedom from outside pressure or dictation in making up his verdict. But his whole duty is not fulfilled in the recognition of existing morbid states. It is required of him to detect latent tendencies to disease, to foresee the coming evil in the shadow it casts before.

What, then, have been the results of the medical examination of lives, as tested in the experience of American companies? In general the medical selection may be said to effect a diminution in the death-rate among insured lives as compared with the whole population, which continues at a lessening ratio for about six years, after which its influence disappears, and the mortality approximates that of the community at large.

Three propositions are regarded as established in the experience of the largest American company:[1]

1. That the advantage of selection diminishes at all ages with the duration of the policy.

2. That it decreases very rapidly among those who insure at the younger periods of life.

3. That it decreases more slowly at middle life and among older insurants, and probably never entirely disappears.

Dr. O'Hara then read a paper on the

USE OF CACTUS GRANDIFLORUS IN CARDIAC AFFECTIONS.

He was called to see E., æt. seventy-four, May 19, 1883, who had bronchitis and some œdema of the lungs; his feet were slightly anasarcous; there was no kidney difficulty, though he passed but little water; he had a mitral regurgitant murmur; some irregularity of heart's action; occasional intermission; pulse 90; he had arcus senilis and atheromatous arteries. The diagnosis was dilatation and failing heart, compensation gone by. He was given digitalis, iron, and nux vomica. He became more swollen generally, had orthopnœa, suffered very much, heart becoming very intermittent on the least effort. The treatment was kept up, with addition of saline laxatives for extreme costiveness. He was going downwards daily, and on June 22d the pulse was very intermittent, and only thirty-four beats to the minute; very water-logged in the lungs and over whole body. Thinking that he could be no worse off with any other medicine, and recalling the fact that I had seen in *Flint's Clinical Medicine*, the statement made that the cactus grandiflorus, in from three to five minim doses, is a valuable heart tonic, I concluded to give it a trial. I ordered it in five minim doses of the fluid extract (Parke, Davis & Co.), every four hours. In a few days every symptom improved, the dropsy disappeared, he could lie down at night to sleep. He has been taking the medicine now for five months—the last month fifteen minims, three times daily, with marked improvement; the dropsy has left him; he has the mitral murmur yet, and some irregularity, but rarely an intermittent pulse.

On another occasion (in a patient similarly affected) I used digitalis, and it failed me. Rev. Mr. V. has hypertrophy with dilatation, commencing mitral degeneration, also commencing aortic valve disease; has pronounced mitral valve regurgitation; he had violent palpitations, irregularity of pulse, and intermissions; pulse between 40 and 50. Here, I am satisfied, digitalis and convallaria aggravated matters, while the cactus relieved the pain, stimulated the heart, and removed irregularity. The heart never comes up above 50 to the minute, but the horrible feelings of death, with the sudden stoppages, are relieved.

In the case of Mrs. L.—dilatation, with failing heart from age, sixty-five years—I have used nothing else, and it has satisfied me. This person had vertigo, anæmia of the brain, dropsy, etc., all due to the failing heart, and the use of cactus inclines me to think that it was a good cardiac tonic.

I introduce cactus to the notice of the Society, because I have found it to have been little used. Many physicians, if they have like experience to mine, must recall the fact that digitalis at times diappoints them, and I would ask them to try this under those circumstances as a substitute. Of course, I have not had much experience with it, and I would like the result of my experience to be confirmed by that of others.

There are two preparations—cactus grandiflorus (night-blooming cerus), and cerus Bonplandii—of apparently same qualities, the latter of which I have made no use.

My limited experience goes to show of cactus grandiflorus:

1. That it is a pure cardiac tonic, whether for functional or organic disturbances, especially in cases of mitral regurgitant disease.

2. Convallaria, though not of service in cases accompanying mitral regurgitation, appears, from Dr. Bruen's paper in *Pennsylvania State Medical Society Transactions*, to be a supplement to digitalis, not replacing it; specially serviceable in backward distention of the lungs, from mitral obstruction, and a tonic for nervous and functional diastole of heart.

3. Belladonna and strychnia will frequently serve to substitute digitalis.

4. Caffeine citrate has been found to be of no effect in my experience for heart affections, functional or organic.

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[1] Report of the Mortuary Experience of the "Mutual Life" of N. Y., from 1843 to 1874, pp. 18 *et seq.*

CORRESPONDENCE.

THE TREATMENT OF VESICAL CATARRH.

To the Editor of The Medical News:

Sir: In your issue of October 8th appears an editorial entitled "The Treatment of Vesical Catarrh," in which the usual resources of the profession employed in the treatment of this rebellious malady are enumerated, and their frequent failure referred to. Two additional remedies, not ordinarily used perhaps, you suggest to the practitioner as being worthy of trial in this condition—namely, chlorate of potassium and salicylate of sodium.

Now what estimate will be placed by the profession upon the value of these remedies in the treatment of vesical catarrh I will not venture to predict: for myself I will say that I have little, if any, confidence in their being able to effect better results than those following the employment of many other medicines prescribed for this disease. I base this opinion upon the fact that other germicide and antifermentative agents, such as the bichloride of mercury (now stated to be the best of this class), carbolic acid, borate of soda used locally, and benzoic acid and benzoate of ammonia internally, have been proved, in the great majority of the cases in which they have been exhibited, to possess but feeble properties, so far as regards any permanent benefit they may have conferred upon the patients.

If, therefore, future experience with the drugs you suggest confirm my expectations as to their curative value in vesical catarrh, it may be concluded that, so far as can be learned from your editorial, the treatment of this disease yet remains as ever, one of the glaring opprobriums of our art, which the energies of the profession should endeavor to remove as speedily as possible.

Apropos of this sentiment, I desire to call your attention to the fact that in your enumeration of the various methods of treatment for vesical catarrh, you have overlooked what many good practitioners consider to be the most prompt and potent means yet suggested for the cure of this troublesome malady, and a long step in advance of the conventional modes of treatment. I allude to a method of treating catarrh of the bladder by strong injections of nitrate of silver, brought to the notice of the profession by Prof. T. G. Richardson, of New Orleans, in a clinical lecture published in The Medical News and Abstract in 1879. As opposed to the weak injections of the nitrate recommended in your enumeration, Prof. Richardson injects a four ounce solution of the strength of twenty to sixty grains to the ounce of water, according to the urgency of the symptoms. If this cause much pain—a result by no means constant—a solution of common salt or of the iodide of potassium is injected into the bladder, which modifies the so-called caustic action of the nitrate. No excessive reaction, if any whatever, followed this procedure.

It is but fair to state that this treatment has been characterized by a leading specialist in this country as "irrational and extremely injudicious," but this criticism, I think, is sufficiently met by the published experience of Prof. Richardson and of others who have boldly employed it with the most gratifying results. My own limited experience in its use was gained in the following way:

I had under treatment a case of vesical catarrh in a man, forty-six years old, of intemperate habits, a native of Ireland. The condition had existed in a mild from for some years as the result of a stricture in the membranous portion of the urethra. The latter was thoroughly dilated, when a most acute cystitis immediately supervened. So intense was the incipient congestion of the walls of the bladder that an active hemorrhage ensued, which quite filled the organ with clotted blood, the presence of which gave rise to the most atrocious suffering in the way of tenesmus I have ever witnessed. Following the breaking up and expulsion of this bladder-clot, the inflammation of the mucous surface commenced. Large quantities of ropy muco-pus digested in foul-stinking ammoniacal urine were frequently voided. Soon there were observed portions of exfoliated mucous membrane also floating in the urine, indicating ulceration of the bladder. The constant suffering, despite the treatment employed, began early to tell upon the nervous system, previously rendered unstable by a life of intemperance and abuse. The patient was almost maniacal at times from the unrelenting tenesmus experienced while voiding the contents of the bladder. He ate and slept but little, rapidly lost flesh, and altogether became truly an object of commiseration and sympathy.

During the four weeks of my attendance, I had used every means of which I had any knowledge to relieve the case. The bladder was frequently washed out with warm water and warm water carbolized. Injections were made of borate of soda (Thompson's), nitrate of silver, two grains to the ounce of water; nitric acid in water, and finally of normal urine, recently passed, and this left in the bladder. Such measures gave only transient relief.

Internally were administered alkalies, acids, triticum repens, buchu, hyoscyamus, benzoate of ammonia, and large quantities of milk. Opium and belladonna, in maximum doses, were exhibited per orem, per rectum, and hypodermically. Morphia hypodermically, at frequent intervals, often reinforced by the inhalation of chloroform, was required to keep the tenesmus in check, and secure sleep.

At this juncture, Dr. S. Eagon, of this city, was called in consultation, and urged an immediate resort to the Richardson method. With much apprehension as to the result of what I then considered to be a heroic measure, I consented. An injection of four ounces of pure water, containing one hundred and sixty grains of nitrate of silver, was promptly injected into the bladder. Opium and alkalies were continued, with the addition of quinine and stimulants, and especial attention given to systematic feeding. From this moment, the case began to improve. All hemorrhage ceased; the tenesmus was almost entirely relieved; long intervals of rest from micturition were secured; mucus and pus disappeared from the urine; the patient slept well; his appetite returned; and he expressed himself as fully realizing his changed condition. On two subsequent occasions, when small amounts of glutinous mucus showed in the urine, the latter was promptly cleared up by the use of a weaker injection of the nitrate, twenty grains to the ounce of water. In about three weeks from the time of the employment of the first injection, the patient resumed his business, and, so far as I know, has had no relapse.

Dr. Eagon informs me that he has successfully employed the same treatment in a number of cases, two of which have come to my knowledge, and that, at some future date, he will publish them in a systematic form with the purpose of furnishing his quota of evidence towards establishing the safety and efficiency of the method as claimed by its originator. In a most readable brochure, entitled "Chonic Inflammation of the Bladder and its Treatment," Prof. Richardson goes fully into the pathology of vesical catarrh, expounds the philosophy of his method of cure, and illustrates by cases the success which has attended its use in his hands.

Respectfully, Henry K. Leake, M.D.

Dallas, Texas.

NEWS ITEMS.

THE CAUSE OF THE RECENT YELLOW FEVER OUTBREAK AT PENSACOLA. FINDING OF THE COURT OF INQUIRY.—The Court of Inquiry, convened in compliance with the telegraphic orders of the Secretary of the Navy, dated Washington, D. C., August 21, 1883, has presented the following report:

The Court of Inquiry has diligently and thoroughly inquired "into all the circumstances connected with, or which led to, the recent outbreak of yellow fever at the U. S. Navy Yard at Pensacola, Fla."

The Court has also carefully inquired:

"Whether or not proper measures were adopted to prevent the introduction of yellow fever into the navy yard aforesaid."

And the Court transmits herewith its proceedings, the testimony taken, and, after mature deliberation, reports that the following facts are deemed established by the evidence adduced:

First, "as to the circumstances which led to outbreak of fever."

Prior to August 1st it does not appear that there were any cases of yellow fever of any suspicious nature on the Naval Reserve. While we are not prepared to say that yellow fever really existed in Pensacola this season, it is not unlikely that fomites and bedding that were not destroyed during the epidemic of 1882, generated mild sporadic cases which eluded the vigilance of the attending physicians, and owing to the constant communication between the City of Pensacola and the Naval Reserve, the fever may have been introduced either through the medium of persons or fomites.

On August 3d, a commercial traveller named Frank French, visited the house of Mrs. Lucy Thompson in Warrington, whom she describes as having the appearance of having been lately very sick, and as then weak and sallow. Persons are known to have visited more or less between the two places, and some have been employed in Pensacola during the summer. There is a possibility that the marines may have visited Pensacola, although there is no evidence that they did so.

There are quantities of equipment stores in the equipment storehouse, which have been in store for many years, and were probably there during the years 1867 and 1874, and have never been broken out and opened until this year.

It is ascertained by evidence that the marines' barracks, lately occupied by them, had at least one case of yellow fever in it in 1875, and there is a possibility that it has remained infected ever since.

A number of men have by necessity been employed on the harbor improvement jetties at Fort McRae, who belonged in Warrington and Woolsey, mostly the latter village, and have been in the habit of visiting their homes once or twice a week. These men have been at work handling ballast for filling mattresses and other labor, near to a large quantity of ballast, which is shown to have come from at least one of the quarantine ballast cribs, used by the Pensacola quarantine authorities during 1881 and 1882, and the Burns's crib at Live Oak is shown to have had ballast from an infected vessel discharged into it late in October, 1881.

On August 3d, Wm. Kelley, a laborer in the Equipment Storehouse, and on August 5th, E. P. Chaffin, storekeeper in the Engineer's Storehouse, which adjoins that of the Equipment, sickened with symptoms sufficiently suspicious in our opinion to be classified as yellow fever, although not so diagnosed by the attending physician. In connection with these cases, it is shown by the evidence of Kelley himself that he had come in contact with men from Fort McRae coming home from their work weekly or semi-weekly, and that Chaffin visited him while sick before being attacked himself. It is shown that on the day Chaffin was taken sick, he was on a wharf in Woolsey, fishing with Mr. Wm. Langley, the son of Mrs. Langley, the grandmother of a child who was the first case of death by the disease; he was also a frequent visitor at her store in Woolsey.

The first case of death from yellow fever was Charles H. Thompson, a child of Mrs. Lucy Thompson, in Warrington, who died August 14th; the attending physician then believed the case to be inflammation of the bowels, but since, he has concluded that it was yellow fever. The funeral of this child was very largely attended by both adults and children of Warrington and Woolsey, by reason of which the disease was rapidly spread, more especially to the latter village. The house of Mrs. Thompson is situated on the principal street and thoroughfare of Warrington, and a lower room in it was used as an ice cream saloon, which was visited freely on Sunday evenings by the young people of the villages, including some of the marines. There was also a club-room on the same street, frequented by the marines and their friends of the reserve. On the evening of the eleventh of August, Private William Flaherty, of the Marines, complained of being ill, and on the twelfth was put on the sick-list; three days later his sickness proved to be yellow fever. It is shown by evidence, that on the evening of the eighth of August, he, with other marines, was in company with two men, Burkhardt and Ordway, at the club-room, when these two men were on their way to their homes in Woolsey from Fort McRae, where they had been at work handling ballast and had not changed their clothes, but wore them home through the streets, passing, among other places, the house of Mrs. Lucy Thompson, in Warrington; her child being taken sick on the tenth; feeling ill on the ninth. Her children are proved to have been playing on the side-walk at the time.

Having reviewed the evidence, we are now of opinion that the epidemic of yellow fever, now near its close, prevailing on the Naval Reserve, may be traceable to one or more of four origins, viz.:

1st. Possible infection from Pensacola by communication of persons, and by articles brought from that city.

2d. Articles in Equipment and Steam-Engineering Storehouse possibly infected in former epidemics.

3d. Possible infection of Marine Barracks since 1875.

4th. Probable infection from the ballast used and handled at Fort McRae jetties by men who lived in and visited the villages of Warrington and Woolsey weekly and semi-weekly in their working clothes.

Second: "Whether or not proper measures were adopted to prevent the introduction of yellow fever into the Navy Yard."

The first case of yellow fever having appeared in the Marine Barracks within the Navy Yard previous to the death of the first case in Warrington, and not finally diagnosed and decided to be yellow fever until three days after attack, any precautions that could have been taken at that time to prevent the introduction of the disease into the Navy Yard would have been unavailing, as the Marine guard and the surgeon himself were already infected.

THE YELLOW FEVER MICROBE. — Dr. Domingos Freire, whose researches into yellow fever were noticed before, has begun, according to the *New York Herald*, the practice of vaccinating persons with a culture of his yellow fever microbe attenuated by six transplantations in gelatine. Five out of six of the first batch suffered slight symptoms of yellow fever, and the Doctor expressed his conviction that they will not be attacked again, or, if they be, will escape with a very mild touch.

Yellow Fever in Mexico.—Assistant Surgeon Main, under date of October 22d and 28th, states that yellow fever still continued at Guaymas up to the 15th October, about five cases, with an average of two deaths occurring daily. The disease was decreasing and would finish its course, it was thought, by the last of the month (October). At Hermosillo the fever was considerably less, only one or two new cases occurring daily, with but one death daily from all causes. No new cases appeared at Mazatlan, but there were many sick with intermittent and typhoid fevers. The Governor of the State of Sinaloa has issued stringent orders prohibiting the exhumation of bodies of those who died of yellow fever. In Culiacan the disease had nearly disappeared, and the people who fled were returning. In the villages near the mountains the fever was still doing much mischief and seemed to have abated but little; the reported mortality was two deaths in three cases. At one of the mines there were ninety-one deaths out of one hundred attacked. The disease had been carried to the mouth of the Colorado River on the coast of Sonora, and no town in that State is known to have escaped the disease. It is said that La Paz has had five thousand cases, but it is impossible to state the mortality; the fever, however, is reported to be extending through the State of Lower California with little change in its general character. The fever was carried by refugees to Tepec, a place of fifty thousand inhabitants located on the highway to the City of Mexico, twelve hundred feet above the level of the sea. The disease was not so severe at this place, due to the prompt manner with which it was met and treated. The authorities at once isolated the infected districts, burnt furniture, clothing, and everything liable to carry the germs; quarantine was established, and every patient with the disease was watched with suspicious care, while the doctors were active and untiring. At San Blas the epidemic was over, and every vessel touching there was kept in quarantine until all danger passed. At Acupulco a number of cases occurred, but no satisfactory statement can be made as to their severity, etc.

The governors of the Coast States have decreed that all available agents shall be used at the expense of their respective States for the relief of the needy and suffering sick, that all interments shall be absolutely free, and that charity funds be raised to aid in the work.

Yellow fever continues at Yuki and Atai, in Sonora, not far from the border of Arizona. It is reported there were 4,000 cases and 500 deaths. In Altata, Sonora, all employés of the custom house were down, and only two out of seventeen recovered; of 150 soldiers but 2 escaped the fever and 41 died. In Ixcallan, State of Oaxaca, a town of 13,000 inhabitants, yellow fever appeared with great severity, 35 new cases daily, mortality not stated. At Manzanillo, a city of 76,000 inhabitants, the fever averaged 292 new cases daily up to the 18th of October, mortality 11 in 100. Its principal interior commerce is with Guadelajava, a city of 210,000 inhabitants, and apprehension is felt it may be carried there notwithstanding quarantine is rigidly enforced, and all railroad enterprise and commercial relations temporarily suspended. In Jalisco the fever appeared among the cotton pickers, brought there, it is supposed, by pedlers, two of whom sickened and died there; five days after, the disease was declared epidemic, every workman being sick. On the railroad the entire force of 30 men was taken down and work ceased. One case of yellow fever came to Bazos de St. Iago, and died there aboard the schooner Hattie, which sailed from Mobile. She is quarantined at Bazos, though no other cases appeared on board.

Assistant Surgeon Main adds a postscript, saying he had just received a telegram from Guaymas, dated October 26th, stating that yellow fever had broken out afresh at that place, and was alarmingly fatal, the report being that eight cases in nine die, and new cases rapidly occurring, with a large number of relapses.

Yellow Fever at Havana.—Sanitary Inspector Burgess, in his abstract of bills of health, furnished vessels bound for the United States, for the week ending October 27, and reports inspections as follows: Am. schr. "Nonpareil," for Key West; Span. brig "Vilasar," for Charleston; Span. brig "Maria Teresa," for New Orleans; Span. brig "Guadalquiver," for Doboy, Georgia; Am. str. "Niagra," for New York; Am. str. "City of Alexandria," for New York; Am. schr. "Grover G. King," for Key West; Span. str. "Pedro," for Charleston; Span. str. "Apolo," for Savannah. The Spanish brigs "Vilasar" and "Maria Teresa," above mentioned, have been in port at a suspicious wharf discharging, the former twenty-five days and the latter thirty days. He regards them both as dangerous, notwithstanding disinfection by him before departure. He reports twenty deaths from yellow fever for the week.

Yellow Fever at Vera Cruz.—Sanitary Inspector Mainegra reports having inspected the following-named vessels up to October 28th: Str. "City of Alexandria," for New York; bk. "St. Cloud," for New Orleans; str. "California," for New Orleans; bk. "Chapman," for Galveston; bk. "Keewardin," for Mobile; str. "City of Mexico," for New Orleans; schr. "Seguin," for New Orleans; schr. "Forest Home," for Pascagoula; str. "Whitney," for New Orleans; str. "City of Washington," for New York. All the above vessels were in good sanitary condition.

Quarantine Regulations at Gibraltar.—The quarantine restrictions at Gibraltar have been somewhat modified, and the Board of Health of Gibraltar has made the following order, repealing all former orders in that behalf, viz.:

"It being considered expedient to assimilate, as far as possible, the regulations respecting arrivals from the Brazils, to those in force in Spain, all arrivals from those latitudes with clean bills of health and health on board, shall, between 1st July and 30th September, be allowed to coal under strict quarantine regulations."

It has also been proclaimed that, "among other things ordered, any merchant vessel or boat from whatever part of the world arriving, shall, on sailing from Gibraltar, receive a bill or certificate of health, according to the circumstances of each particular case, from the Captain of the Port, or his assistants, in such form as shall be from time to time directed by any order or orders of the Board of Health of Gibraltar, any which certificate or bill of health such Captain of the Port or his assistants are thereby authorized and required to give; and further, that the order or orders from time to time made by the said Board of Health in pursuance of the said order of his late Majesty for carrying into effect the regulations and provisions thereof shall be duly published at Gibraltar by proclamation."

Consular Health Reports.—The U. S. Consul at La Paz, Mexico, in a letter to the State Department dated the 18th of October, says that prior to the date of previous letter (September 15th, ultimo), and during the whole month of September the yellow fever in La Paz reached the highest pitch of its malignant effects, also on the coast of the Peninsula, and more so at Mazatlan and Guaymas. The mortality in La Paz for the month of September, was yellow fever 114, other causes 8. It is impossible to get an approximate number of the mortality which occurred at the towns of the upper and lower coast of Lower California, but I am sure of its being over 300. He says, speaking of furnishing weekly reports, "no accurate register has been kept by the authorities, and the members of the Board of Health deserted the city for the mountains to avoid the disease, besides we have been entirely without communication with the border States." The Consul, who suffered with yellow fever in September, adds that the disease was then (Oct. 18th) disappearing from the city.

The Consul at Mazatlan, Mexico, under date of October 13th, states that the Board of Health of that place declared the epidemic over, and that clean bills of health will be given to vessels sailing from Mazatlan from and after the 13th of October. Leading physicians pronounced the disease to have been bilious remittent fever.

Consular reports from Rio Janeiro up to the 29th of September, indicate a continuance of the epidemic of smallpox. There were 77 deaths from that disease for the week ending September 29th, in a total of 278 from all causes.

At Matanzas the yellow fever has about disappeared, only two cases having occurred during the week ending October 26th.

The Cholera at Mecca.—A despatch from London, dated November 5, states that there have been 240 deaths from cholera at Mecca in one week.

Georgetown Medical College.—Surgeon-General John B. Hamilton, U. S. Marine-Hospital Service, has accepted the Chair of Surgery in Georgetown (D.C.) Medical College, vice Dr. Beale. It will be remembered that Prof. Hamilton temporarily filled the Chair of Surgery in Columbia Medical College, Washington, D. C., last year, during the absence of Prof. J. Ford Thompson in Europe.

Office of Surgeon General of the Army.—The question of filling the office of Surgeon General of the Army was not disposed of at the Cabinet meeting on Tuesday, as was anticipated.

Royal Gift to Dr. Grant, of Ottawa.—Her Royal Highness the Princess Louise, before leaving Ottawa, presented Dr. Grant with a very handsome despatch box as a recognition of his kind services to her during her stay in Ottawa. It is rumored that a knighthood is also to be conferred upon Dr. Grant.

National Hygienic Congress.—The first session of a National Hygienic Congress was held in the city of Mexico on the 10th of October: it presented a petition to the Government, asking that an article be added to the Constitution, placing all sanitation in the power of the general Government, instead of in the States.

The Health of the Army.—The report of the Surgeon-General of the Army for the fiscal year ended June 30, 1883, prepared by the late Surgeon-General Crane, has just been made public.

Among the white troops, the total number of cases of all kinds taken on the sick list was 37,697, being at the rate of 1.802 per thousand of mean strength; total number of deaths, 214; total number reported to have been discharged the service for disability, 879. Among the colored troops, the total number of cases of all kinds reported was 4,689; total number of deaths, 26; total number reported to have been discharged for disability, 101.

As an indication of the peculiar hardships to which the troops are exposed, the rates of admission for wounds, accidents, and injuries are 122 per thousand higher than those reported for the German army, and 142 per thousand higher than the decennial rate of the British army. The colored troops make a favorable showing in the small number of admissions for alcoholism and its results, exhibiting a rate of only 4 per thousand to a rate of 76 per thousand of mean strength among the whites. On the other hand, in diseases of the nervous system, they have an unexplained preponderance.

The additions to the library include 3,912 volumes and about 5,000 pamphlets, making the total number in the collection about 60,900 volumes and 68,700 pamphlets. It is believed that this library has now become of such importance and utility and is so widely consulted, that it should have the means of placing on its shelves as soon as published every new medical work, great or small, in all languages. Estimates for $10,000 have been forwarded. To the collection of the army medical museum 638 specimens were added. Of these, 94 were purchased and 544 were contributions. The Surgeon-General renews the recommendation of his predecessor for a new fire-proof building for the army medical museum and library.

There are now 9 medical officers on sick leave of absence; of these, 3 have been found incapacitated for active service and recommended for retirement, viz., Assistant Surgeons T. F. Azpell, J. W. Buell, and W. R. Steinmetz; one has been recommended to be brought before an Army Retiring Board, with a view to his retirement from active service, viz., Assistant Surgeon Z. V. De Hanne, and three more are regarded as permanently disabled. Four medical officers are on ordinary leaves of absence after a tour of duty on the frontier, leaving 162 medical officers for duty on October 1, 1883.

The Removal of the Remains of Harvey.—The desire which has at times animated many Fellows of the Royal College of Physicians of London, and others, to remove the remains of Harvey from the position in which for some 226 years they had lain in the vault at Hempstead, Essex, to a more honored position, has at length been realized. On Thursday afternoon, the 18th of October, St. Luke's Day, the transference took place, with appropriate and reverential ceremony. It may be recollected that Harvey's death occurred when he was in his eightieth year, on June 3, 1657, and that the funeral took place on June 26th, when the body was attended far beyond the walls of the City of London by a long train of his friends of the College of Physicians, and the remains were finally deposited in a vault at Hempstead, some fifty miles from London, which his brother Eliab had built. He was lapped in lead, and on his breast, in great letters, was his name, "Dr. William Harvey." Where thus placed the coffin has since remained, together with the leaden shells which contain the remains of several other members of the Harvey family. The vault, some five and twenty years ago, was in a very neglected condition, and the leaden case containing Harvey's remains was suffering from its exposure to the elements, and possibly the inroads of the village boys. In 1859, Drs. Quain and A. P. Stewart visited the remains at the request of the College of Physicians, and found the leaden case full of dirty water, which had penetrated through a crack in the metal. The vault was afterwards made clean, and the open window securely barred, but the leaden case was not repaired.

The leaden case was roughly shaped in the form of a body, having a head, neck, and shoulders, from which it gradually tapered towards the feet, where it was turned up as if to receive the feet at a right angle to the body. At the centre of the body, the upper surface of the lead had collapsed, so that on the inner side the upper and lower layers of lead almost touched. The extreme length of the case from head to heel was six feet three inches, which must have been longer than was actually necessary, as Harvey is always described as having been of small stature. On the breastplate of the leaden case was the following inscription:

Doctor
William . Harvey .
deceased the 3
of June . 1657
aged . 79 . years.

The condition of the coffin did not allow one to suppose that more than the skeleton remained in the case, and possibly even all that was not now preserved. In regard to the other leaden cases in the vault, one need not here dilate; except to say that most of them were in a better state of preservation than was that of the doctor; and that the two cases which lay immediately next to the doctor's coffin had been completely flattened by visitors to the tomb standing upon them when stooping down to read the above inscription on the breast of Harvey's case.

On January 28, 1882, the whole tower of Hempstead Church fell towards the southwest into the churchyard, fortunately without inflicting bodily injury on any person. Dr. B. Ward Richardson went down and examined the remains of Harvey. He found that the chapel had not been touched by the fall of the tower, but that the lead of Harvey's shell was going fast, and that there was water in the shell. This he reported to the Royal College of Physicians in February, 1882, showing them drawings and illustrations of the whole thing, and adding the suggestion that the remains should be raised to the Harvey Chapel above the vault, or brought to Westminster Abbey. A committee was formed at once to report upon the whole subject, and advise thereon, and it was decided to keep the remains at Hempstead, and remove them to the chapel above the vault. The necessary consent to this procedure was given. A marble sarcophagus for the reception of the leaden case was decided upon, and an architect was sent down to examine the state of the floor and vault, in order that the floor of the chapel might be sustained if necessary, in order to bear the weight of the sarcophagus and the leaden shell and its contents. Under his direction, pillars were built in the vault to strengthen the floor, and a plain sarcophagus, cut out of pure white Carrara marble, was constructed.

The following inscription was placed at the head of the sarcophagus:

William Harvey
Born 1578
Died 1657

The following was engraved on one side:

The remains of William Harvey
Discoverer of the Circulation of the Blood
were reverentially placed in this Sarcophagus by
the Royal College of Physicians of London
in the year 1883.

A leaden case was also prepared, in which might be placed the edition of the works of Harvey published in Latin by the Royal College of Physicians of London in 1766, and edited by Drs. Akenside and Lawrence. On one side of this was engraved:

Gvlielmi Harveii
Opera Omnia
Edita
MDCCLXVI

On the other side was inscribed:

The complete works of William Harvey,
deposited October 18th, 1883.

A memorial bottle, hermetically closed, was also prepared and wrapped in lead. In the bottle was placed a memorial, engrossed on vellum. The leaden case enclosing the bottle had inscribed upon it—

SCROLL.
Deposited October 18th, 1883.

The following is a copy of the memorial itself:

"The body of William Harvey lapt in lead simply soldered was laid without shell or enclosure of any kind in the Harvey Vault of this Church of Hempstead, Essex, in June, 1657.

"In the course of time the lead enclosing the remains was from exposure and natural decay so seriously damaged as to endanger its preservation, rendering some repair of it the duty of those interested in the memory of the illustrious discoverer of the circulation of the Blood.

"The Royal College of Physicians of which corporate body Harvey was a munificent Benefactor and which by his favor is the possessor in perpetuity of his patrimonial Estate at Burmarsh, Kent, did in the years 1882–83 by permission of the representatives of the Harvey family undertake that duty.

"In accordance with this determination the leaden mortuary chest containing the remains of Harvey was repaired and as far as possible restored to its original state and on this 18th day of October 1883 in the presence of four representatives of the Harvey family and of the President, all the office-bearers, and many other Fellows of the College of Physicians, was reverently translated from the Harvey Vault to this Sarcophagus raised by the College for its reception and preservation."

A special train conveyed the office-bearers, Fellows of the College of Physicians, and representatives of the Harvey family to Hempstead, where a large number of persons were assembled. The President and the officials of the College immediately assumed their robes of office, and a visit was made to the vault to view the chamber and Harvey's shell with the other coffins lying there. Harvey's leaden coffin was then raised to the churchyard up an inclined plane made by placing boards over the flight of steps. The eight Fellows of the College who acted as bearers, Sir Risdon Bennet, Drs. Owen Rees, Quain, Sieveking, Richardson, Shepherd, Duckworth, and Moore, then ranged themselves on either side of the coffin, and carried it through the churchyard, and up the nave and aisle, into the Harvey Chapel. Preceding the remains of Harvey were the officiating clergymen, Mr. Eustace, Vicar of Hempstead, and Mr. Escreet, the curate. Following the remains was a procession which included the four representatives of the Harvey family, the President of the College, carrying the silver emblem of his office, the College officers in their gowns, and the Fellows of the College, conspicuous among whom were Drs. Acland and Paget, the Regius Professors of Medicine, in their scarlet robes; besides these gentlemen were Dr. Broadbent, Dr. Hubert Airy, Mr. George Eastes, and Mr. Stear. Whilst the procession was passing up the church, the dead march in *Saul* was played. A service was then held, after which the remains of Harvey were lowered into the sarcophagus, and Sir William Jenner placed the metal case containing the scroll sealed in a glass bottle, and the metal box containing the copy of Harvey's works in a bottle, beside the leaden coffin in the interior of the sarcophagus. The vicar read the collect from the burial service ("O merciful God"), and concluded the service with the Benediction. The cover of the sarcophagus was placed in position after some little delay.

Thus within the last few years full honor has been done by Englishmen to the memory of Harvey. A noble statue, subscribed for by all classes of people, has been erected in his birth-place, Folkestone, Kent, and now the Fellows of his own loved College of Physicians have, with their own hands, placed his remains in a tomb which will for centuries demonstrate to the world the admiration which, in 1883, they entertained for the signal services rendered to Mankind by Harvey.—*British Medical Journal*, October 20, 1883.

A NEW DEPARTURE IN SOCIETY USEFULNESS.—On taking the chair at the Ophthalmological Society of the United Kingdom, MR. JONATHAN HUTCHINSON proposed that memoranda dealing with the treatment of many common affections of the eye should be prepared and issued to the members of the medical profession under the guidance of the Ophthalmological Society. In order clearly to understand the nature of the proposal, it is necessary, and will conduce to perspicuity, to discuss, first, the reasons for the issue of such memoranda; secondly, the method by which these documents should be distributed; and, lastly, why this kind of thing should be carried out rather by a corporate body than by other means. This subject, it will thus be seen, has to be treated from the points of view of theory, practice, and ethics.

There can be no doubt that a large number of cases of corneal ulcer do continually get worse mainly from the want of knowledge of the existence of simple remedies, and more especially of that valuable preparation the dilute yellow oxide ointment of mercury. Again, as Mr. Hutchinson urged, the number of instances of loss of sight from acute glaucoma which occur every year even now must be considerable, and this may be chiefly attributed to the lack of information regarding the proper time for the employment of iridectomy. Many excellent general practitioners do not realize the fact that, notwithstanding the presence of acute inflammation, the immediate performance of iridectomy is precisely the remedy, not only because the tension of the globe is thereby relieved, but also because the inflammatory state associated with the glaucoma must disappear by the same act. When we consider that it is hardly possible for the busy practitioner to have much time to devote to the acquisition of special knowledge of ocular diseases, and when we reflect on the amount of mischief and loss to the nation which annually accrues from such, in a measure excusable, lack of knowledge, we think enough has been put forward to show that the theory of Mr. Hutchinson's new departure rests on a sure basis. From the standpoint of ethics there can be nothing savoring of quackery in the carrying out of the scheme under the auspices of the Society. All individual names would be suppressed in the idea of the issue of instructions under the abstract title of Therapeutic Memoranda of the Ophthalmological Society, so that no accusation could be made against the proposal on this score. There is yet the further argument, also alluded to by Mr. Hutchinson, that advertising quacks may establish a lucrative business out of the knowledge of one or two simple remedies, which, however powerful in doing good, are also probably for the most part powerless to do evil. Altogether, we think the suggestion of Mr. Jonathan Hutchinson is of considerable importance, and hope that the Society mentioned, and possibly other more or less special societies, may see their way to the adoption of his overtures.—*Lancet*, October 20, 1883.

THE VALUE OF KOCH'S RESEARCHES ON THE BACILLUS TUBERCULOSIS.—DR. BURDON SANDERSON, in a lecture recently delivered in the Museum of the University of Oxford, said that Koch's discovery of the bacillus tuberculosis would, beyond the possibility of doubt, serve as the foundation for an efficient prophylaxis against pulmonary consumption and the other less familiar forms of tubercular disease connected with it by community of origin and of issue.

HEALTH IN MICHIGAN.—Reports to the State Board of Health, for the week ending October 27, 1883, indicate that dysentery, consumption, diarrhœa, bronchitis, tonsillitis, influenza, and rheumatism have decreased in area of prevalence.

Including reports by regular observers and others, diphtheria was reported present during the week ending October 27, and since, at fifteen places; scarlet fever at eighteen places, and measles at five places.

OBITUARY RECORD.—PROFESSOR J. A. H. DEPAUL, Professeur Agrégé in the Faculty of Medicine of Paris, has recently died of pneumonia, after an illness of three days. Prof. Depaul was born in Pau, in 1811. At the age of seventeen he went to Paris, and after many hardships completed his medical course. He received the degree of Doctor in Medicine in 1840, was created Professeur Agrégé in 1847, Surgeon to the Hospitals in 1853, having been elected to the Académie and the Société de Chirurgie in the previous year. He devoted himself more especially to obstetrics and gynecology; his work in this department of medicine, and his position as a teacher, need only be mentioned. In 1862 he was called to the chair of Clinical Midwifery, which he filled until his death.

Among his better known works may be mentioned his *Traité theorique et Pratique de l'Auscultation Obstetricale* and his *Traité de Clinique Obstetricale;* the latter, unfortunately, remains unfinished. He founded and was the editor of the first obstetrical journal in France, the *Archives de Tocologie*, and was one of the collaborators of the *Dictionnaire des Sciences Encyclopediques.* Notwithstanding his age his professional and scientific work was kept up almost to the day of his death.

He was elected President of the Académie of Médicine in 1873, and upon the announcement of his death, at its meeting of October 23d, that body immediately adjourned, as a mark of respect to the memory of its distinguished member.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM OCTOBER 29 TO NOVEMBER 5, 1883.

MCKEE, JAMES C., *Major and Surgeon.*—Relieved from duty in the Department of California and assigned to duty as Medical Director, Department of the Columbia.—*Par. 5, S. O. 249, A. G. O.*, October 31. 1883.

PRICE, CURTIS E., *Captain and Assistant Surgeon.*—Assigned to duty at Fort Custer, M. T.—*Par. 1, S. O. 187, Department of Dakota*, October 25 1883.

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ORIGINAL LECTURES.

MALPOSITIONS OF THE UTERUS.

A Clinical Lecture, delivered at the Long Island College Hospital.

By ALEXANDER J. C. SKENE, M.D.,

PROFESSOR OF GYNECOLOGY, AND SURGEON TO THE LONG ISLAND COLLEGE HOSPITAL.

(Reported by Edward Develin, M.D.)

GENTLEMEN: You will remember that in my last two or three didactic lectures, I discussed, at some length, flexion of the uterus, giving you the nature and history of this deformity of the uterus, and also its pathology, as I understand it. I have here several cases of flexion and retroversion which will clinically illustrate some of the points which I endeavored to bring to your notice.

The first case is that of a young married woman, who has all of her menstrual life suffered from dysmenorrhœa, and has remained sterile since her marriage. The character of her dysmenorrhœa is precisely that which I described to you as occurring in flexion of the uterus. In making digital examination, I find that the os uteri points forward to an abnormal degree; in fact, it is directed almost towards the introitus of the vulva, whereas, as you know, it should point towards the sacrum. I also observe that the anterior portion of the cervix is almost on a line with the anterior vaginal wall; in fact, there is imperfect invagination of the cervix anteriorly, as if there had been arrest of development at this point; posteriorly, the invagination of the cervix is unusually great. Through the anterior vaginal wall I can detect the fundus of the uterus pointing towards the upper portion of the symphysis pubes. From this you will see that the cervix and body of the uterus are flexed forward; in passing the sound into the uterus, you will observe, by the sweep of the handle of the instrument externally, that it first passes backwards towards the upper portion of the sacrum, and then abruptly at the internal os, as I carry it along, it turns towards the symphysis pubes, thus proving, by the course of the sound, that the signs of anteflexion obtained by the touch are correct.

This case well illustrates two points to which I would call your attention—viz., that this form of flexion has associated with it almost invariably dysmenorrhœa, and also sterility.

CASE II.—Our next patient, also a married lady, before marriage suffered slightly from dysmenorrhœa. After her marriage, she became twice pregnant, and miscarried on each occasion. Since her first miscarriage, her dysmenorrhœa has been greater.

In making digital examination of this case I find the cervix in the normal position, but in pursuing my investigations backward behind the cervix I find a mass which feels like the fundus uteri, and which dips down in the cul-de-sac of Douglas almost as low as the termination of the cervix. These physical signs then indicate retroflexion, but in order to confirm this evidence I pass a sound into the cervical canal, which, you will observe by the handle of the instrument, passes in the normal direction until I reach the internal os. I then am compelled to turn the curved point of the sound backward, and it readily passes into the body of the uterus; the direction being downward and backward. In order to do this I am obliged to elevate the cervix upon the sound, so as to bring it more on a line with the body and fundus. Here we have, then, a case of well-marked retroflexion which, in all probability, existed to a slight extent before her marriage, but became aggravated during her few months of pregnancy, or was developed subsequent to her miscarriages.

You will remember that I told you, that in anteflexion sterility was most marked, and that in retroflexion there were some cases in which pregnancy occurred, but that in this deformity there was a liability to miscarry, unless the deformity was treated during gestation, so as to raise the fundus up into the normal position, and sustain it there while the development of the uterus is going on. Often when this is accomplished a complete cure will result. Much can be done during pregnancy in the way of treatment to prevent miscarriages. I will here illustrate the position of this deformity by a diagram upon the board, by which you will see that, while it is a deformity belonging to the same class as the previous case, it is just the opposite in the direction of the flexion: the one being forward and the other backward. We will now endeavor to restore this organ to its normal relationship by carrying the fundus upward and forward, and sustaining it there by means of a pessary. By comparing the two cases you will see at a glance in the first case, forward flexion of the body and cervix, and in this case retroflexion of the body alone, the cervix remaining in its normal position.

CASE III.—This patient is a lady in middle life; she has had five children and seven miscarriages. She comes to us because of these frequent miscarriages, and also because she suffers from a very distressing pelvic tenesmus, and an irregular and profuse menstruation.

In making my examination in this case, I find that the os uteri points towards the meatus urinarius, or, perhaps more correctly, the middle third of the urethra, the cervix being low down in the pelvis. I also find that the entire uterus is lying very low down in the pelvis; in fact, the fundus uteri is lower in the pelvis than the termination of the cervix, and between the cervix and the fundus there is a well-defined cul-de-sac. This shows that the body and cervix uteri are flexed upon each other; this is also, then, a case of retroflexion, but it is more than that, it is also a retroversion. Now you must understand that these two conditions may occur together. You will remember that in the second case there was simply a retroflexion, that is, the body was flexed backward, but the cervix was normal. Here in this case we find that the body is flexed upon the cervix, but at the same time the whole organ is lying further backward and downward in the pelvis than is normal, so that we have a combination of the two, a deformity and a displacement. This complication with flexion not infrequently occurs, and I may here call your attention to another complication of flexion which is not infrequently found, and that is anteflexion with a retroversion. I here represent upon the board an anteflexion of the uterus as it usually occurs. Now, suppose that I take that uterus, which is flexed forward, and carry the entire organ downward and backward into the position of retroversion? I would still have a deformity of the uterus, because the fundus is flexed forward upon the cervix, but the entire organ itself lies further backward and downward in the pelvis than normal, so that we have an anteflexion with a retroversion. It is well to be able to make out these complications, and to know that they may occur, because, if we should fail to appreciate these conditions we might be somewhat puzzled to know just what the condition was.

To return to the case now under observation, we will endeavor first to bring the cervix and body of the uterus on a line with each other; this we will do by elevating the fundus, or rather changing it from retroflexion to retroversion, we will then maintain this condition of the uterus, if possible, by means of a pessary which will support the body. After a time, we will be able, by treating it as a retroversion, to elevate that fundus still further and maintain it in position;, hoping, by so doing, that the atrophied walls of the uterus at the junction of the body and cervix may so improve in their nutrition and strength, that in time the uterus will be able to sustain itself in its normal relations.

If, after this, the patient should again become pregnant, we will watch her carefully, and sustain the uterus in position, until it is sufficiently developed to rise above the brim of the pelvis, and thereby be sustained, so that she may go on to her full term of gestation. If we can do this, and then watch her carefully after her confinement, and prevent the uterus from again becoming retroverted and retroflexed, we may succeed in curing her. But this is anticipating; for the present, it will suffice to try and relieve her present displacement and deformity.

Case IV.—Our next patient is a married lady, forty-five years of age; she has been married eighteen years, and has one child. She complains of backache, leucorrhœa, and pelvic tenesmus.

Now, in this case, we desire to know what is the cause of this tenesmus, which is aggravated by walking, standing, or defecation, and also this backache, which, she states, is relieved on lying down.

I will first try to find out the cause by physical exploration. Now, in passing the finger along the vaginal walls, first I come in contact with the posterior wall of the cervix, which is just the opposite to what it should be: I find the os pointing towards the symphysis pubes. Passing my finger further back, I find what appears to be the fundus lying in the hollow of the sacrum, so that the axis of the uterus will correspond with the middle strait of the pelvis.

Now, if I were to attempt to pass the sound, I should find it would pass directly backwards. We find, then, that this is a case of retroversion. In replacing the organ, I pass a sponge into the vagina (using the sponge-holder), and make pressure upwards, at the same time introducing a sponge anterior to the cervix in a similar manner, and making equal pressure, the patient being in Sims' position. This is the most simple and the easiest way of restoring the uterus to its normal position in this form of displacement.

Now, in this case, I might very readily make a mistake; my *examination* here was not sufficient to prove the diagnosis. The mere fact of finding the cervix forward, and observing in the hollow of the sacrum a mass which generally indicates the fundus uteri, might be entirely a mistake. Suppose I find the cervix pointing towards the symphysis, and I find a tumor posteriorly, which represents the fundus of the uterus. Now, I might have an anteflexion with this mass posteriorly, and which to the touch feels like the fundus, but which may be simply a fibroid or ovarian tumor crowding the fundus forward.

This is a condition of things not infrequently found, and, on making a careless examination, it is pronounced to be a retroversion. In order to overcome the possibility of any source of error, it is necessary to pass the sound, when, if it is an ordinary retroversion, the sound will pass directly backwards.

I remember one of these cases where I came very near making a serious error. I was called in consultation, and was told by the physician in charge that he believed he had a case of retroversion. I made an examination, and, to the touch, it was a perfect case of retroversion. I tried to pass the sound, but the uterus was somewhat tender, and I desisted. I was about to abandon it, thinking the case was so plain, when I remembered that I would not have the opportunity of seeing the patient for some time; I therefore pursued my investigations a little further, and succeeded in passing the sound up to the fundus without any great difficulty, and by this means I could lift the uterus away up beyond the mass I had previously felt, and could get my finger between the body of the uterus and this mass, which proved to be a small ovarian cyst, which was extremely dense, and which felt equally as solid as the fundus itself.

This shows that, if we desire to be accurate in our diagnosis, we must not be satisfied with the touch alone, but must use the sound in these cases.

Case V.—This patient is married, and is thirty-one years of age; has never been pregnant; she is troubled with dysmenorrhœa; further than this she is perfectly well. Now we must ascertain the cause of this sterility and dysmenorrhœa; the pain, she states, commences immediately at the beginning of the flow. This history is extremely brief, but so typical of this class of cases, and the physical signs coincide so well with the symptoms, that I will briefly put them together.

I will first represent upon the blackboard a section of the pelvis, including lines to represent the plane of the inlet and the outlet. I find the cervix pointing towards the introitus, and carrying the finger along the axis of the vagina, it comes directly in contact with the os externum, instead of the anterior wall of the cervix, as it should do. I find that this cervix occupies the position of complete retroversion. I pass my finger upwards in front of the cervix, and I find the fundus pointing towards the symphysis pubes, and the cervix looking in almost the same direction.

Now these physical signs, the forward flexion of the body of the uterus and cervix, coincide with the clinical history of sterility and dysmenorrhœa; they go together so generally that I need hardly discuss them separately. This patient has scanty menstruation. With the malformation of the uterus which we have here, the function of menstruation is very often irregular in quantity and duration, sometimes being scanty and at other times profuse. Early in the career of such cases it is often profuse, owing to the hyperæmic condition of the sexual organs; as they advance in life there is some change in the nutrition of the uterus which interferes with the development of the mucous membrane, and causes menstruation to become scanty, while in former years it was free. Now if we can straighten this uterus by throwing the cervix backward and raising the fundus, I have no doubt we will be enabled to relieve the symptoms which exist, but I have grave doubts as to relieving the sterility at this late date; the longer this abnormal condition exists the more doubtful ought we to be as to the possibility of overcoming the sterility. To overcome bad habits in these organs, it is desirable to take them in hand when young; the tendency at twenty years of age is to repair damages and defects of development, but at thirty it is not so to the same extent. So in this case we can hardly promise to relieve her of the sterility, but we can hope to relieve the dysmenorrhœa.

Case VI.—This patient is suffering from menorrhagia, and has been since the birth of her last child.

I now propose to explore the cavity of the uterus to ascertain the cause of the bleeding. Upon passing this curette into the uterus I find that there is retroversion of the organ; I find it also to be beyond the normal size. On the withdrawal of the instrument I here find this piece of fungous growth which I removed from the anterior wall of the uterus; although, in my manipulations with the curette, I detached from the walls of the uterus a much larger amount than I here show you, and which I have brought away for inspection to complete my diagnosis. On passing the curette over the surface of the uterus, I could distinctly feel that I was separating a large quantity of this material. The posterior wall appeared to be quite smooth, but on the anterior wall I detected that scraping sensation which is caused by this fungous material. This patient had albuminuria during her pregnancy and perhaps made an imperfect recovery; there is also at the present time a marked catarrhal condition of the cervix and dilatation of the canal, conditions which frequently accompany these growths of the endometrium.

Case VII.—The patient I here present to you is twenty years of age, she was married when eighteen, and comes to us suffering from menorrhagia which has troubled her many months. A week ago, during her menstruation, she states that she passed a large clot, since which time she has had a slight flow from the vagina. I will now make a physical exploration of the parts. You notice that as I pass in this probe it passes backwards, indicating a retroversion of the uterus, the physical signs of which I also obtained by the touch. On further examination I find it to be one of those cases of sterility resulting from displacement and corporeal endometritis, giving rise to those fungous or polypoid growths of the mucous membrane of the uterus; specimens of which I have often presented to you at my clinics. This is all sufficient to account for the sterility and menorrhagia.

The treatment is to remove the fungosities with the curette, and then restore the uterus to its normal position, and retain it there with a pessary. This may be all sufficient to relieve the endometritis, but, should that linger, the usual treatment for that affection should be employed.

ORIGINAL ARTICLES.

GALVANIZATION OF THE BRAIN, AND ITS VALUE IN THE TREATMENT OF CHOREA.[1]

By CHARLES L. DANA. M.D.,
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The phenomena which result from passing a galvanic current through the healthy human brain, and through that of lower animals, are within certain limits quite well known. As regards the human brain, these effects may be classified under the heads of subjective phenomena, or those of which the patient is conscious, but which do not reveal themselves to the observer; and objective, or those which are apparent and can be noted.

The subjective phenomena, when galvanic currents of moderate or great intensity (5–40 Daniell's cells) are passed from brow to neck, are as follows:

(1) Pain, sensation of numbness and pressure.

(2) Malaise, faintness, nausea.

(3) Flashes of light, color-sensations, and dimness of vision. Auditory sensations (with powerful broken currents). Gustatory sensations (metallic taste, etc.).

(4) Dizziness, subjective and objective.

The flashes of light, metallic taste, and dizziness are most easily induced, and they are most prominent at making and breaking the current.

The objective phenomena are:

(1) Involuntary movements of eye (nystagmus, etc.).

(2) Movements of the head toward the anode on closure, toward the cathode on opening the circuits, with transverse currents. Disturbance of equilibrium.

(3) Convulsions (?). Very rare; not reported of late years.

(4) Unconsciousness. This I have produced in a girl aged eleven, by applying a current of Stöhrer's cells, with a very large anodal electrode covering both parietal bones. The condition was not that of syncope, as the face remained flushed, and heartbeat was strong and regular.

(5) Syncope—a psychical effect (?). Sleepiness.

(6) Salivation, vomiting.

(6) Lowering of temperature of surface (?).[1]

(7) Change in calibre of retinal vessels.[2]

(8) Change in the calibre of meningeal vessels.[3]

Besides the above there occur *After-effects:*

(1) Headache, head-pressure, dimness of vision, drowsiness.

In the diseased brain there follow, with more or less regularity, certain therapeutical results, such as:

Relief of brain exhaustion, melancholia, habitual headache, cerebral congestion, irritative diseases of central origin; changes in apoplectic conditions and in chronic, inflammatory, and degenerative diseases.

In the hypnotic state, when neuro-muscular excitability is increased, Charcot states that the movements of various voluntary muscles can be excited by acting upon the cranial surface over the motor centres.

In the lower animals, owing to the fact that stronger currents can be used, more marked objective symptoms can be brought out. These are:

(1) More pronounced movements of head, and of eyes; convulsions.

(2) Changes in the calibre of the meningeal (pia mater) arteries.

These vascular changes are as follows:

(*a*) With *ascending currents*, cathode to brow, anode to neck; in other words, with cathodal galvanization: dilatation of pial vessels, and increase in rapidity of flow of blood.

(*b*) With *descending currents* (anodal galvanization): generally a contraction of pial vessels, not always very marked.

(*c*) With *transverse currents:* dilatation of vessels on the side of the anode, contraction on the side of the cathode.

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[1] Read at the meeting of the American Neurological Association, June 20, 1883.

[1] Letourneau, Journ. de Thér., viii. 9, p. 321, 1881.

[2] Ibid. Bull. de Thér., xcv. p. 130; Gazette Méd., 2 s., xv. 38. 1878.

[3] All of the foregoing effects that are produced by direct excitation of the brain can also be produced reflexly by stimulation of afferent nerves—a significant fact.

As a result of direct electrical irritation of the exposed brain of animals, we get certain phenomena not observable when the cranial bones are interposed. These are:

I. Contraction of voluntary muscles by direct irritation. This can be done better, and the motor regions more accurately mapped out, the higher in the scale the animal is, as regards neuro-muscular mechanisms.[1]

II. Excitations of special and general sensations.

III. Disturbances of equilibrium; forced movements.

IV. Changes in various neuro-mechanisms of organic life are also observable; *e. g.*, in the beat of heart, the tone of arteries, the rhythm of respiration, movements of stomach, intestines, bladder, Fallopian tubes, spleen.

Change in temperature.

Changes in the activity of glands; *e. g.*, the salivary, intestinal, and hepatic.

Below is given a table showing the results obtained by a number of experiments:

Experimenter.[2]	Animal Used.	Mode of Application.	Result.
Legros and *Onimus.*	Dog.	+ Pole to brow } — " neck } = (10 cells.) Reverse =	Constriction. Dilatation.
Letourneau.	Dog.	— Brow } + Neck } = ascending.	On breaking: Pupil widened; retinal vessels narrowed.
	Man.	— Facial nerve } + Neck } = ascending. (10 cells.)	On breaking: Widening of pupil and narrowing of retinal vessels. On closure: Narrowing of retinal vessels.
		+ Facial nerve } — Neck } = 18 cells (Onimus).	On closure: Contraction of arteries. On breaking: same.
Fisher. *Löwenfeld.* *Erb*, *Nothnagel.* *Riegel*, and *Jolly.*			*Faradic* and *galvanic* currents applied on cranium or thigh affect changes in cranial circulation; generally of congestion. Mechanical peripheral irritations do the same. Contractions of muscle-groups do the same.
Löwenfeld.[3]	Rabbits.	— Brow } + Neck } = ascending or cathodal. + Brow } — Neck } = descending or anodal. Transverse: + one side, — other } =	Arteries widen; circulation hastened. Arteries narrowed, but less uniformly; circulation slowed. Arteries widened on anode (+); narrowed on cathode (—). This difference persists.

The vascular changes in ear and brain membranes do not run parallel.

From the above, it will be seen how potent the electrical current is in modifying the functional activity of the brain.

A question of great interest now presents itself, and that is, In what way does the galvanic current produce the phenomena which result when percutaneously applied to the brain? A number of facts and theories have been advanced:

I. One thing which is, I believe, established beyond question is that these currents effect some changes in the tone and calibre of the meningeal bloodvessels. It is further quite definitely established[1] that the cathode or ascending current causes these vessels to dilate (in lower animals). It seems very probable also that the anode (or descending current), passed from brow to neck, causes a constriction of the bloodvessels. It yet remains to be shown, however, that this change is either constant or very marked. Transverse currents in lower animals have been shown by Löwenfeld[2] to cause dilatation of vessels on the side of the anode, and contraction on the side of the cathode, as has been stated.

It is well known that mechanical and electrical irritations of sensory, or pressor, and depressor nerves, in various parts of the body, will likewise cause, reflexly, changes in the calibre of the cerebral vessels. For example, cerebral congestion can be produced by irritating the sciatic. It has been thought, therefore, that the vascular changes above described are also the reflex of sensory irritations.

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[1] The anode is more irritating than the cathode Asz > Ksz (Hitzig) when applied to the convolutions.

[2] For bibliographical references see Löwenfeld's "Electrotherapie des Gehirns." München, 1881. Erb's "Handbuch."

[3] Op. cit.

[1] Vide Löwenfeld, op. cit.

[2] Vide op. cit.

It is much more probable, in my opinion, judging from experiments with anæsthetized patients and narcotized animals, that these vascular changes are produced by a direct action of the current. The evidence, however, seems to me conclusive that these contractions and dilatations of the bloodvessels furnish only one factor in producing the various phenomena resulting from cerebral galvanization.

II. The theory advanced by Althaus, that these phenomena are mostly reflex from the action of the current upon the trigeminus, has been disproved.

III. The galvanic current, when passed through a nerve, changes its irritability, this being lowered at the anode (positive pole), raised at the cathode (negative pole), (phenomena of electrotonus).

It is possible that similar changes in irritability are produced by polar galvanization of the nerve-centres. Hitzig found, indeed, that the cortical motor centres responded more readily to the anode than to the cathode—the reverse of that which is the case with peripheral nerves. It has been suggested that this is due to the chemical action of the anode, which increases the acidity of the gray matter.[1] However this may be, Hitzig's observation does not prove that the general effect of the positive pole is not to lower and that of the negative to raise the irritability of the cerebral tissues as a whole. Experiment shows that the physiological effects of applying the anode are milder than those of the cathode; also that the anode very probably contracts the pial vessels, and slows the circulation. Clinical observation also shows, with hardly an exception, that the effect of the anode therapeutically is more agreeable and quieting.

IV. The galvanic current, besides its effect upon the bloodvessels and upon nerve-irritability, doubtless produces some direct change in the metabolism of the nerve-tissue, hastening, delaying, or modifying it. Whether these metabolic effects vary at all with the poles is uncertain.

V. The current acts to some extent upon the ampullary terminations of the eighth nerve, and probably thereby will cause dizziness and vertigo.

I have spoken of polar effects, and of ascending and descending currents. It appears to me that we ought to abandon the latter term as regards the brain, and perhaps also the cord. In passing a current from brow to neck, it descends some fibres and vessels, and ascends others.

I have found that by strictly polar electrization on the human brain the same phenomena result as by using the so-called current method; that is to say, the anode is, like the descending current, more mild. The well-known fact, that transverse currents produce unpleasant effects more easily than longitudinal, is readily explained by supposing it to be a polar action. The two sides of the brain have their irritability changed; the rapidity of nervous conduction is also changed, thence interference of nerve impulses and thereby disturbance of function. The blood-supply on the two sides is also, according to Löwenfeld, unequally affected.

I believe we should gain by using the polar method and nomenclature in studying the effects of cerebral galvanization.

I am inclined to hope that I have devised a way by which more powerful effects can be gotten in the galvanization of the brain than by the ordinary methods. It consists in placing the foot upon a copper plate connected with the cathode, and placing the anode, a large curved sponge electrode seven inches by four, upon the head. It is known that with the peripheral nerves more powerful polar effects are gotten by having the poles far apart, and it appears to me that the same may be true as regards internal organs. Great caution should of course be used in applying these large currents, for even mild ones sometimes produce unpleasant after-effects.

I have said nothing about the question whether electricity really reaches and affects the brain, for that is settled by the investigations of Burckhardt, Rumpf, von Ziemssen, Erb, and others.

My conclusions regarding the percutaneous galvanization of the brain are:

1. That it is one of the most easily reached and easily affected of central organs.

2. That in ordinary galvanization the polar method and polar nomenclature should be used, since it is probably the pole and not the direction of the current which produces specific effects.

3. That the anodal galvanization of the brain probably lowers cerebral irritability, contracts the pial vessels, slows the circulation, and produces effects upon the nutrition of the brain.

4. That its action is chiefly a direct one, but is supplemented by reflex processes.

5. That possibly more powerful or special polar effects may be gotten by using widely separated electrodes.

We come now to the particular subject of cerebral galvanization in chorea minor. I believe ordinary chorea minor to be an irritative disease of some part of the gray matter of the voluntary motor tract. The irritation may be chiefly in the spinal cord, as seems to be the case sometimes in dogs; or it may be chiefly in the brain (*i. e.*, internal capsule, basal ganglia, or cortex), as is the case with the ordinary chorea of children and in the post-hemiplegic forms. The later developed or accessory portions of this motor tract are most affected; and these are parts most readily responding to electrical stimulation.

Chorea is not a disease which should be left to nature. It often, indeed generally, runs a cyclical course, but in the beginning the physician can never tell whether it will not cling to the child for months or years. Hence, the best therapeutical means should be promptly applied to its treatment. The reports as to the value of electricity in chorea have heretofore been most conflicting. The methods of applying electricity have also been varied and numerous. Benedikt, Remak, Onimus,[1] Beard and Rockwell,[2] Meyer,[3] Leube,[4] Jaccoud. von Ziemssen,[5] have applied galvanism to the spine, Meyer, Leube, and Jaccoud using strong currents, the others weak currents. Von Ziemssen, and Beard and Rockwell do not speak well of it. The others claim good results. Althaus commends central galvanization with faradization of the affected muscles. Beard and Rockwell recommend general faradization in preference to galvanization in most cases.[1] Rosenbach and Steifert[7] apply galvanism to the tender points along the spine. Hammond speaks unfavorably of electricity in chorea, and Russell Reynolds[2] said in 1874 that electricity was of no use in this disease. The whole makes a somewhat unfavorable showing for electricity, and I should never have attempted its use, had it not seemed to me that it had so far generally been applied irrationally.

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[1] The gray matter of the cortex is neutral or acid; that of the white matter, alkaline. Acids go to the positive pole.

[1] "Guide Pratique d'Electro-thérapie," 1882, p. 193.

[2] "Medical and Surgical Electricity," p. 455.

[3] Meyer's "Medical Electricity," p. 350.

[4] Berlin. klinisch. Wochen., No. 35, 1874.

[5] "Cyclopædia of Practice of Medicine," vol. xiv. p. 468.

But, acting upon the hypothesis that anodal galvanization of the brain ought to prove sedative in functional spasmodic troubles of cerebral origin, I began some time ago to use this method in the treatment of chorea. It was not until recently, upon the appearance of the second volume of Erb's work,[3] that I learned that he and Berger[4] had been using anodal galvanization of the brain in chorea also. Neither of these authors, however, report detailed cases or give specific clinical facts upon which they base their conclusions. I, therefore, feel the more justified in presenting my results now.

I present here a record of eight cases, treated more or less systematically with galvanization of the brain.

Case I.—Dora S., aged ten. Parents healthy; third in a family of eight, and the only one who has had chorea. Is the brightest scholar in the family and fond of study. Never had rheumatism; had a previous attack of chorea three years ago. First seen *Jan. 17th.* Present attack began about a week before. Is somewhat anæmic: has a mitral regurgitant murmur; it is loud, systolic, heard best at apex, is transferred and can be heard behind. Choreic movements chiefly on left side. Ordered liq. potass. arsenit., ♏ vj, t. i. d.

20th. — No improvement; worse if anything. Galvanism: anode to right parietal region; five Stöhrer's cells. Continued arsenic.

25th.—Was better for a day or two; then relapsed. Galvanism and arsenic.

Feb. 18.—Had improved for a time; then relapsed. Galvanism and arsenic. Did not return. Subsequently learned that she had rapidly recovered after last treatment.

Case II.—Martha S., aged ten. Family history negative. Had had a previous attack one year ago. Never had had rheumatism. First seen *Jan. 8th.* Somewhat anæmic; no cardiac murmurs. Chorea began about a week ago; unilateral, left side. Ordered Fowler's solution, ♏ v, t. i. d.

15th.—Worse. Renewed arsenic, ♏ v. Applied galvanism, eight cells.

17th.—Better until to-day. Renewed above.

19th.—Same story. Renewed above.

22d.—Better. Applied galvanism only. Did not return.

Case III.—Margaret H., aged eight. Family history negative. Has had no rheumatism and no previous attack.

Jan. 16.—First seen. Anæmic and poorly nourished. No cardiac murmurs. Attacks began six days ago, mostly on right side. Treated her with cod-liver oil, iron, quinine, and Fowler's solution—♏ vij–viij.

29th.—About same. Galvanism, six cells, five minutes. Fowler's solution continued in ♏ ix doses.

Feb. 2.—Had been very much better for two days, then gradually grew worse. Renewed galvanism and arsenic.

16th.—Better for a few days, then worse. Galvanism.

18th.—Better for a day. Galvanism.

23d.—Better to-day. Galvanism. Did not return.

Case IV.—Lena S., aged fifteen. Family history negative. Had never had rheumatism; third attack of chorea.

Feb. 16.—First seen. No cardiac murmurs. Chorea very bad on left side; cannot use knife and fork; attacks began six or seven days ago. Applied galvanism, six cells.

18th.—Better; galvanism, three cells.

21st.—About same; improved for a day. Galvanism, three cells.

23d.—About same; gave Fowler's solution, ♏ vj, and galvanism, three cells.

28th.—About same; renewed above.

March 14.—Nearly well.

Case V.—Alfred S. aged nine. History negative. Had no rheumatism or cardiac disease. Had a left-side ataxic chorea, not well marked. Would sometimes stumble and fall; could not eat well with left hand. Treated from April 11th to May 12th. Steadily improved under arsenic and galvanism, but chiefly the former.

Case VI.—Sarah K., aged ten. Family healthy. Has had no rheumatism. Has had two previous attacks of chorea—one and two years ago respectively. Present attack came on two or three weeks ago. First seen *April 16th.* An active, healthy-looking girl. Has a mitral regurgitant murmur. Very severe chorea on right side. Cannot use the right hand to feed herself Very restless and irritable. Ordered Fowler's solution, ♏ vj.

23d.—No improvement. Ordered Fowler's solution, ♏ vij, and galvanism.

27th.—Better; renewed above.

30th.—Better; renewed above.

May 2.—Better; renewed above.

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[1] Dr. Rockwell informs me that in his experience galvanization acts better in cases of chorea where the children are not very anæmic or ill-nourished. In this latter class he prefers to use general faradization.

I cannot consider that "central galvanization" as used by Dr. Rockwell is the same thing as the stabile anodal galvanization with large electrodes and gradually increased and decreased currents, described and used by myself.

[2] "Electro-therapie," Leipzig, 1882, R. H. Pierson, p. 184.

[3] "Clinical Uses of Electricity," p. 83.

[4] Handbuch der Elektrotherapie, Heft II., p. 568. Erb says "the recent chorea of children has been benefited very decidedly by electrical treatment, [anodal galvanization] and the disease materially shortened in many cases."

[5] Centralbl. f. Nervenheilkunde, No. 10, 1879, p. 220.

5th.—About same; renewed above.

9th.—Has been better, but is now worse, and is nearly as bad as ever. Has been taking arsenic.

9th–14th.—Gave daily galvanizations and continued arsenic. She steadily improved and is now practically well. The immediate improvement after the daily galvanizations began was notable.

Case VII.—Irene B., aged fourteen. Family healthy. Had rheumatism last January. Had one previous attack of chorea. First seen *April 16th.* Patient not well developed. Has mitral regurgitant murmur and left supra-orbital neuralgia. Chorea began a week ago; it is very severe on the left side chiefly. She cannot feed herself with left hand. Ordered iron, quinine, and arsenic.

18th.—No better. Galvanism, two cells. Continued other remedies.

23d.—Much better; can feed herself. Renewed above, and gave cod-liver oil.

25th.—Better; no galvanism.

27th.—Worse, since galvanism was stopped. Renewed it with other remedies.

May 2.—Galvanism.

8th.—Has been kept on medicine alone and no galvanism. No improvement.

8th–14th.—Received galvanism every day and nothing else, except part of the time valerianate of zinc, which she had taken before without result. Is now practically well.

Case VIII.—Bertha H., aged thirteen. Family healthy; is oldest of four children, and the only one affected with chorea. Never had rheumatism. First had chorea seven years ago when first sent to school; it was bilateral, but worse on left side. It has remained with her since, only disappearing mostly during fall and winter, reappearing in the spring. In spring of 1881 went to hospital, and remained there for one and one-third years. Could always feed herself and walk. Came out last fall well; continued so until about ten days ago, when arms and legs began to twitch, chiefly on left side; face not noticeably involved. First seen *May 7th.* General appearance good; is somewhat pale, quiet, well-grown. No cardiac murmur. Ordered Fowler's solution, ♏ viij, t. i. d.

9th.—No better. Fowler's solution, ♏ x.

16th.—If anything, is worse.

16th–23d.—Applied galvanism, 2–5 Stöhrer's, 6–8 Daniell's cells daily. No other treatment.

By *19th* was much better. On *23d* was well.

The first cases recorded showed me, as I believed, that galvanizations produced temporary improvement at least, when given only three times a week. The last cases convinced me that daily applications had a potent effect upon the disease.

The average duration of the disease in seven cases was thirty-four days; the eighth case, not a well-marked one, lasted about forty days. The average duration of treatment was twenty-five days. The average duration of the disease, according to See, is sixty-nine days; but this is too long for chorea as it occurs in New York. The average of about thirty cases, aside from the above, treated by me chiefly by arsenic was between six and eight weeks. It is not upon the statistics of duration, however, that I am led to believe in the efficacy of anodal electricity. I observed at first that patients would say that they felt better for the next twenty-four or thirty-six hours after the seance; then the old symptoms came back. This happened in such a number of instances that I could not believe it was coincidence. Again, some cases I treated with arsenic, with no result; I then added galvanism, and improvement at once began. In some instances, I used electricity alone, and with benefit. The electricity should be applied daily for at least ten days. If, after that, there is no improvement, it may be discontinued. When given only three times a week, it did not always effect good result. In those cases in which electricity was applied every day, I am inclined to think that arsenic or other specific medication is not needed.

What I claim for anodal galvanization is that it is a most valuable adjunct in the treatment of chorea; that given daily for a week or ten days with arsenic, and probably without, it will materially shorten the duration of the disease in most cases of chorea in children.[1]

The method of application is as follows: A large sponge-electrode of flexible brass, 4 by 2 inches, is thoroughly moistened with salt water. The hair of the patient is also thoroughly wetted, and the electrode applied over the side of the head, above the ear. In hemichorea it need only be applied over the side opposite to the one affected. The other electrode is placed in hand of the affected side. The electrode upon the scalp is made positive, and a stabile current of three to six Stöhrer's, four to eight Daniell's cells, is passed for from three to six minutes.

THREE CASES OF FOREIGN BODIES IN THE TRACHEA OR LARYNX; REMOVAL; RECOVERY.

Reported by H. R. WHARTON, M.D.,
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Case I.—Edward McC., aged seventeen months, was brought to the Children's Hospital on November 30, 1881, with the following history: A few hours before admission, while playing with some beans, he put one into his mouth, and apparently swallowed it, but was almost instantly attacked with a violent paroxysm of coughing and decided respiratory embarrassment. When the child was first seen, he presented the following symptoms: Marked dyspnœa, paroxysmal cough, great restlessness, and lividity of the face.

Prof. Ashhurst, who was in the hospital at the time of the child's admission, considered the symptoms sufficiently urgent to justify the performance of tracheotomy. Ether was administered, and the operation was accordingly performed, and the trachea exposed below the isthmus of the thyroid; a branch of the thyroid plexus of veins was divided, and bled profusely, but was easily secured and ligated. The trachea was then opened, and as soon as the edges of the tracheal wound were retracted, a forcible expiration occurred, which expelled the foreign body from the wound. This proved on examination to be a small white bean. The respiratory difficulty instantly disappeared, but as the trachea was quite flexible, and as its calibre might be interfered with by the pressure of inflammatory products, a small silver tracheotomy tube was introduced, and retained in position by the ordinary means.

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[1] Since writing the above, Nothnagel, in a clinical lecture on chorea, published in the *Allgemein wien. medicinische Zeitung*, recommends the use of galvanism by somewhat similar methods.

Dr. George W. Jacoby, of this city, informs me that three years ago, he and Dr. Rudisch used galvanization of the brain daily in a very considerable number of cases of chorea, but with unsatisfactory results. I cannot explain the difference between his experience and the contrary one of Rockwell, Erb, Berger, Nothnagel, and those just recorded above, except by assuming some difference in the technique of applying it.

The child reacted well, and presented no unfavorable symptoms; the tube was removed on the fourth day, and, at that time, the respiratory acts were carried on both through the wound and the mouth.

The further progress of the case was entirely satisfactory; with the exception of a slight attack of bronchitis, which rapidly responded to treatment, no unfavorable symptoms presented themselves, and the case was discharged from the hospital, with the wound healed, on December 14th.

Case II.—James K., aged nineteen months, was admitted to the University Hospital May 3, 1883, with the following history: Four days before admission, the child, who lived in the country, some forty miles from Philadelphia, was amusing himself by biting grains of the common gourd seed corn from the cob, and feeding them to the chickens. While so employed, he accidentally inhaled a portion of a grain, and was instantly seized with a violent attack of coughing. As his symptoms became gradually worse on the fourth day after the accident, his physician advised his parents to bring him to the hospital. When admitted, the symptoms of dyspnœa were so urgent that Prof. Ashhurst was hastily summoned, and decided to perform tracheotomy at once. The child was given a few whiffs of ether; but as the respiration was much embarrassed, the incision was rapidly made and the trachea exposed without any considerable hemorrhage. The trachea was then opened, and the edges of the tracheal wound held open by wire retractors; respiratory movement had entirely ceased, and the child's appearance had become most alarming.

Artificial respiration was resorted to, and kept up for some minutes, even after all hope of resuscitation seemed to have passed; but finally a voluntary expiration occurred, which brought a portion of a grain of corn into the wound, from which it was removed.

Respiration was now thoroughly established, and was performed satisfactorily while the tracheal wound was kept open, but as soon as the retractors were removed dyspnœa again occurred. A small silver trocheotomy tube was now introduced and held in position in the ordinary way; it was thus found that the respiratory difficulty had subsided, and the breathing was carried on quietly by this means.

The child presented no unfavorable symptoms after the operation, but the attempt to remove the tube on the tenth day was unsuccessful, as the child soon presented symptoms of dyspnœa which necessitated the hasty reintroduction of the tube. Numerous attempts were made, even under ether, to remove the tube permanently; but all were unsuccessful for a like reason and the child was discharged from the hospital at the parents' request, wearing the tracheal tube, on June 26, 1883.

The case was again seen on July 23d, when it was found that the tube could be removed for a longer interval without alarming symptoms supervening. The parents were instructed to present the case from time to time, when attempts would be made to discard the use of the tube, but the case has not been seen since the last-named date.

The two preceding cases are of interest, especially, from the fact that the operation was performed upon quite young patients, both being under two years of age, and recovery following in both instances.

The condition noted in Case II., namely, the difficulty in the inspiratory act, the edges of the tracheal wound being drawn together and thus preventing the admission of air, apparently due to the extremely flexible condition of the trachea, is one that I have never before noticed.

Whether this was due to the normal flexibility of the trachea in a child of this age, or to the inflammatory condition of the mucous membrane at the seat of operation which had been set up by the prolonged presence of the foreign body, and had extended to the other elements of the trachea, causing a general inflammatory softening I am unable to decide, but that it was due to the latter cause in a measure, I am disposed to think, for in Case I., where the age of the patient was even less, the difficulty did not exist, and the tube was only introduced as a precautionary measure, as stated above.

The permanent removal of the tube after tracheotomy, as was seen in Case II., is sometimes a matter of great difficulty, but can generally be accomplished if sufficient patience be exercised, the tube being withdrawn from the trachea from time to time, and the child allowed to breathe without its use for a gradually increasing period of time at each withdrawal. That its permanent removal need not be despaired of is shown by numerous cases in which, even after the tubes had been worn from periods varying from several months to years, their use was finally dispensed with.

The difficulty produced by the removal of the tube is to be explained by the healing of the external wound, as far as the tube will permit, and its adhesion to the trachea, which causes it to assume a valvular action during the inspiratory acts; and also by the liability of the operation of tracheotomy to cause undue irritability and disorderly action of the muscles of the glottis, interrupting their usual rhythm; this latter fact has been pointed out by Mr. Thomas Smith.[1]

Case III.—Ellen W., aged seven years, was brought to the Children's Hospital on Aug. 13, 1883, with the following history: On the previous night, while holding a pin in her mouth, she attempted to speak, when the pin suddenly disappeared, and she supposed she had swallowed it, until she was suddenly seized with a severe attack of coughing and pain, the latter she referred to the upper region of the larynx. When examined she presented no marked symptoms of dyspnœa, had a slight cough, and complained principally of pain and a sensation of sticking, which she located in the upper portion of the larynx. Upon digital examination, the point of a sharp body could be felt beneath the tissues a little to the right of the pomum Adami. As the child was very nervous and difficult to control, I decided to etherize her and endeavor to remove the foreign body through an external incision.

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[1] Medico-Chir. Soc. Trans., vol. xl. viii.

Ether was administered, and I made an incision a little to the right of the median line of the neck, and the tissues were divided, layer by layer, until the laryngeal fascia was exposed. At this step in the operation the point of the pin could be seen firmly imbedded in the right ala of the thyroid cartilage, and was seized with forceps and drawn out until its head impinged upon the inner wall of the larynx; the point was now bent to a right angle to prevent its falling back into the cavity of the larynx and thus being lost sight of. The wound was now enlarged downwards, so that in case of hemorrhage after removal of the foreign body the trachea could be rapidly opened and a tube introduced.

The pin was now seized with forceps, and a tenotomy knife introduced through the cartilage, close by its side, and the foreign body withdrawn without difficulty, a few bubbles of air only escaping, the edges of the puncture coming together, and preventing the further escape of air from the wound.

The external wound was closed with sutures, and a wet dressing applied.

The child reacted well from the ether, and was carefully watched for symptoms of hemorrhage into the larynx, but no unfavorable symptoms presented themselves.

The case progressed favorably until the third day, when an abscess formed in the wound, which was relieved by removing several of the sutures. After this, the child's recovery was rapid and uninterrupted, no laryngeal or tracheal symptoms presenting themselves; and the wound being entirely healed, she was discharged from the hospital on Sept. 6, 1883.

In the preceding case, the symptoms referable to the presence of the foreign body were not alarming, and I have no doubt that it could have been removed *per vias naturales*.

But as the child was extremely nervous and difficult to control, and as I feared that a delay might be followed by some change in the position of the foreign body, I decided upon the external operation, which seemed to offer the most speedy means of removing the offending body.

Mr. Semon[1] reported, before the Clinical Society of London, a case in which he removed a pin from the larynx of a boy, aged thirteen years, by the internal operation—that is, with the laryngeal forceps. In this case, the pin had been impacted for thirteen months, and the point projected a short distance into the œsophagus; there were fixation of the crico-arytenoid on one side, paroxysmal cough, and some difficulty at times in deglutition, but, on the whole, the symptoms referable to the presence of the foreign body were much less than would have been expected. A complete recovery followed its removal.

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MEDICAL PROGRESS.

The Course of the Flexor Longus Digitorum Pedis.—Dr. Sinclair White points out a mistake, occurring in some of the anatomical text-books on this point.

Having examined a considerable number of limbs with regard to this point, he finds that in no instance does the tendon of the flexor longus digitorum pass beneath the sustentaculum tali, its course being downwards and forwards over the inner surface of the astragalus and internal lateral ligament of the ankle-joint, in most cases grooving the upper part of the inner margin of the sustentaculum, and, in a few, passing above and in front of that process without touching it or any part of the os calcis in its course.

A glance at the articulated bones of the leg and foot will be quite sufficient to convince anyone of this. It will be seen that the groove on the back of the internal melleolus in no way corresponds with the concavity of the arch of the os calcis, and that the tendon passing down the groove on the back of the malleolus, could not gain the under surface of the arch, except by crossing over the prominent inner margin of the sustentaculum tali, and the tendon of the flexor longus pollicis, which lies immediately underneath that process; but the tendon of the flexor longus pollicis is not crossed by that of the flexor longus digitorum until the anterior margin of the os calcis is reached, so that the latter tendon must be internal to it behind that point. Inspection, however, of the recently dissected parts is the best proof.—*Journal of Anatomy and Physiology*, October, 1883.

Dislocation of the Semilunar Cartilage of the Knee.—Although this injury is described in all surgical text-books, we yet believe it is one that is not infrequently overlooked, especially on its first occcurrence. A gentleman falls down, and is picked up complaining of severe pain in the knee, with partial or complete immobility of the joint, which speedily becomes swollen. There is great likelihood that in these circumstances the diagnosis of "severe sprain" will be made, and the real condition remain unnoticed. The failure to replace the dislocated cartilage at the time not only entails much suffering and interference with the function of the joint, but it very greatly lessens the probability of a complete recovery ever being accomplished. The cartilage may be reduced, but it fails to become firmly fixed in its place, and ever afterwards there is a liability for it to slip out again during the free movements of the joint. When this happens, acute pain, possibly a fall as well, and temporary lameness are occasioned. There is, therefore, every reason why the surgeon should endeavor to recognize this particular injury on its first occurrence, and, having recognized it, to treat it properly. The accident happens during some sudden wrench to the joint, not necessarily severe; immediately severe sickening pain arises, and the limb is fixed in the flexed position, although passive movement is possible. Synovitis quickly ensues. If the cartilage is displaced from between the bones, or marginally, it forms a projection just over the interval, between the femur and tibia; but in some instances it is dislocated inwards, so as to lie between the two condyles of the femur, and then is quite beyond reach. In such cases the diagnosis must rest alone upon the cause of the accident—some wrench or sudden movement—the acute pain and fixity of the joint in the flexed position. The symptoms are more severe than those caused by a simple sprain of the joint from such an amount of violence, while on the other hand, the slipping of a loose cartilage between the bones causes still more acute suffering, and the body itself can be felt at times. The first thing to do is to replace the cartilage by extreme extension immediately following upon full flexion of the joint. In some cases the cartilage slips into place with a distinct snap, and in all cases the power of movement is at once restored. It is then important for the patient to wear a firm support to the knee for some months, which shall render impossible such a wrench of the joint as shall displace the cartilage, and if this is persevered in the cartilage again becomes adherent to the tibia. It is believed that the internal meniscus is more frequently displaced than the outer.—*The Lancet*, October 27, 1883.

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[1] British Medical Journal, April 21, 1883.

Rupture of an Aneurism into the Gall-bladder.—Chiari reports the case of a man, æt. 33 years, who, for a long time before his death, had suffered from attacks of cardiac pain. He died during a sudden and profuse intestinal hemorrhage. At the autopsy there was found in the transverse portion of the duodenum, in the upper surface, a round opening, two-fifths of an inch in diameter. This led into the gall-bladder, and further examination showed the ruptured sac of an aneurism of the cystic artery, which had burst into the gall-bladder. Besides this, there was also found, in the lower half of the gall-bladder, a second aneurism, involving the inferior cystic artery, and filled with thrombi. The stomach, intestines, and œsophagus were filled with coagulated and semifluid blood. This makes the fifth case on record in which the gall-bladder has been involved by an aneurism of the cystic artery.—*Centralbl. f. klin. Med.*, June 16, 1883.

Relations of the Dorsalis Pedis Artery to the Cuneiform Bones.—Mr. Author Hensman states that the usual course of the dorsalis pedis artery may be indicated by a line drawn from the front of the ankle, midway between the malleoli, to the back of the first interosseous space.

This line will be found to cross in succession the fore part of the astragalus, the scaphoid, the middle, and also a small portion of the internal cuneiform bones.

In contemplating these facts it appeared to him strange that anatomists, in their descriptions of this artery, should have made no mention of the *middle* cuneiform bone, as one of its most constant posterior relations. In all the descriptions he had read with the view of ascertaining this point, he found that the internal cuneiform bone is always either named or clearly implied, but, as far as he had learned, the middle cuneiform is never even noticed.

It will be seen on dissection that this artery usually takes a fairly straight course between the points named; sometimes, however, it curves outwards, as if pulled aside by its tarsal and metatarsal branches, and in these instances its relations are necessarily somewhat altered. But he found when the direction of the artery is quite normal that it invariably crosses the broad base of the middle cuneiform, and merely touches (but not always) the fore and outer part of the internal cuneiform, just where it grasps the inner articular facet on the base of the second metatarsal bone. There is usually a slight scooping out of the pointed end of the cuneiform bone at this spot, and the artery most commonly occupies this little valley before dipping into the first interosseus space on its way to the sole of the foot.

After its passage over the middle cuneiform its deep relations are not constant. It may rest on the internal cuneiform as just stated, or, being more externally placed, it may skirt the inner side of the base of the second matatarsal, close alongside its junction with the inner cuneiform, or, finally, it may take a mid-course between the two, thus overlying both bones.

It can therefore, he thinks, be easily shown that this vessel always crosses the middle cuneiform bone, that it sometimes entirely avoids the internal cuneiform, and, moreover, that when it touches this latter bone it is for a distance short in comparison to the length of its path across the middle cuneiform bone.—*Journal of Anatomy and Physiology*, October, 1883.

The State of the Sensitive Nerves in Strychnine Poisoning.—In a recent memoir on this subject, Professor Couty, of Rio de Janeiro, states that in his experiments strychnine intoxication does not cause an increased sensibility of the sensitive nerves, but a diminution of their excitability; a diminution which is increased in proportion as the action of the drug is prolonged. Prof. Couty's experiments were only made on the nerve-centres of the brain and spinal cord. The brain especially loses its excitability under the action of strychnine, while the experiments on the spinal cord, on the contrary, show that there is an exaggerated sensibility.—*Revue Scientifique*, Oct. 27, 1883.

A New Ptomaine.—M. Brieger has discovered a ptomaine which forms during the digestion of albuminoid matters, and their transformation into peptone. The digestive act should not be prolonged, as in that case the ptomaine disappears. In order to obtain it, the digested matter is treated with ethylic alcohol; the insoluble parts are then treated with amylic alcohol (pure). This amylic extract is very toxic, and by successive purifications we may obtain a substance which, in doses of $\frac{1}{20}$ of a grain (in the impure state), suffices to kill a frog. To kill a rabbit, a dose of grs. vij–xv is sufficient. These animals, poisoned by it, die in a sort of a coma and stupor with paraplegia.

Other substances, such as fibrine, caseine, muscular tissue, and liver and brain tissue, also furnish this peptone. It is probable that it also forms during normal digestion, and if, as Mr. Brieger states, this is true, it is of great importance, especially in legal medicine.—*Revue Scientifique*, October 13, 1883.

Total Absence of the Left Lobe of the Thyroid.—Mr. William J. Gow, Student, St. Bartholomew's Hospital, states that in dissecting a body lately, which was that of an old woman, apparently between sixty and seventy years old, it was found, on examining the front of the larynx, that the isthmus and left lobe of the thyroid gland were totally absent. The inferior and superior thyroid arteries on that side were exceedingly small, but each of them sent a slender branch to the place where the missing lobe should have been. The right lobe was not at all larger than usual, and showed no signs of ever having been united across the middle line, the borders being remarkably well defined. The remains of the thymus gland seemed larger than usual.—*Journal of Anatomy and Physiology*, October, 1883.

Risks Attending Catheterism in Cases of Long-standing Retention of Urine.—In commenting upon Sir Andrew Clark's remarks on catheter fever (see The Medical News, November 10th, p. 512), Sir Henry Thompson writes to *The Lancet* (October 27th) as follows:

The risk sometimes incurred by elderly men in commencing the use of the catheter, accurately appreciated by Sir A. Clark at the Clinical Society, and well described and commented on in your leading article, is a subject of great importance. It is, however, by no means unrecognized by surgeons, and has long been one of much interest to myself; so that I have made it a special topic for remark and caution in my clinical lectures.[1] I have so often observed the danger in certain cases associated with a resort to catheterism, although rendered absolutely necessary to relieve chronic retention of urine, that I have advised the greatest care and special management for them. But the dangerous and fatal results are rare as compared with the great number of elderly men who are compelled to depend for relief on the catheter, and who derive the greatest advantage and comfort from its daily use. For a case never becomes advanced and dangerous in regard of retained urine, unless the retention has been long overlooked or neglected, and when advice to empty the bladder in an early stage has unhappily not been given. If employed at that early stage, before the urinary organs have suffered damage from retention persisting perhaps through many months or even years, no fatal or dangerous "fever" will be met with. It is the *neglect of timely catheterism*, and not the employment of a catheter, which is the real occasion of the fatal issue, which now and then occurs under the circumstances described.

The first surgeon to point out the occurrence of this particular form of "fever" was Sir B. Brodie, in his lectures; and I beg you will allow me to cite an extract from my last edition, referring to his views, describing the symptoms, and indicating the method which I have adopted to diminish the risks which should mostly be expected, and always be provided for, when a pint or more of urine habitually remains in the bladder, despite the patient's efforts to relieve himself. The passage is as follows:

"I revert to a fact, already alluded to, which is one of considerable importance, that although the urine may have been quite clear before the catheter was employed, yet in some instances, after its habitual use has been continued for a short period, the secretion becomes cloudy, and the patient is feverish and unwell. A stage of constitutional derangement, more or less marked, has sometimes to be passed by those persons who, having long experienced difficulty, suddenly change from their usual mode of micturition to the artificial one. It requires some judgment, as I have already pointed out, to decide when this change should be made, but having made it, the phenomena described occur in a few exceptional instances; and this fact you should be aware of, and you should watch the result of the daily catheterism. Sir Benjamin Brodie was the first to remark it, and in his valuable lectures called attention to the circumstance that patients might even sometimes gradually succumb with symptoms of low or irritative fever a few weeks after beginning to use the catheter. Bearing this in mind, our mode of proceeding may be advantageously modified in relation to those patients whose amount of residual urine is large. It is then undesirable to empty the bladder completely on every occasion of catheterism during the first few days. If the patient has been in the habit of retaining perhaps a pint of urine, or even more, after he has made water, it is a serious change for the bladder to be suddenly and completely emptied two or three times a day; the organ soon becomes irritable, the urine is charged with pus, and the patient loses appetite, becomes feverish, and there is sometimes considerable danger to life. The rule under such circumstances is to proceed cautiously. Instead of removing the entire quantity, leave some urine behind; and thus a compromise is made between the exigencies arising in this condition of the bladder, and the usually absolute rule that it should be emptied. Draw off half or only two-thirds of a pint; you will thus relieve the organ partially, and in the course of a week or sooner you may gradually accomplish the entire emptying of the bladder, and all will probably go well. And it conduces greatly to success to permit no outdoor movement to such a patient, but confine him to his room, in a warm temperature, if the weather be cold, or even to his bed for a few days. The probationary period, while the use of the catheter has to be learned, and the onset of chronic cystitis with constitutional disturbance is to be feared, is more safely passed *if absolute rest and quiet* are accepted as necessary conditions by the patient. It is only within the last few years that I have pursued this course, and I cannot speak too highly of the results. Nevertheless, very rarely, notwithstanding every precaution, you will find a case in which during this process the tongue grows slowly more red, dry, and contracted; the powers of life gradually fail, the senses become impaired, and the patient sinks. You will always find in such cases, if an autopsy is made, old-standing pyelitis, with dilatation and marked degeneration of the renal structure, and you will know that in no circumstances could the patient have long survived" (p. 57).

The lesson to be learned—and it is an important one—is this. When the bladder of an elderly man fails to empty itself, let him learn to use a soft catheter without much delay: thus life with comfort may often be maintained to its natural term. Neglect the catheter until chronic disease of the organs is established, and a catastrophe may then be hastened by the use of the instrument. Scores of men whom I know in this town, between sixty and eighty years of age, still active, mature in mind, and more than ever serviceable to their fellows, owe their existence entirely to habitual catheterism.

The Future of Cerebral Surgery.—At the conclusion of his introductory address, delivered before the Royal Medical and Chirurgical Society, on October 23d, Dr. Ferrier made a most important observation, which cannot fail to prove of interest to all contemporary surgeons. He remarked that physicians would not be justified in advising surgical operations on the brain, and surgeons would refrain from active interference, until the principles and diagnosis of regional disease had been established with as near an approach to certainty as is possible, where all is hidden from the eye and hand. But, he continued, it is doubtful that any reason now remains why a surgeon, who fearlessly exposes the abdominal viscera, should not open the cranial cavity. Dr. Ferrier has seen complete recovery constantly follow some of the most formidable operations that have been performed on the brain and its coverings, in animals of the most delicate and almost human organization, when stringent antiseptic precautions had been taken. He cannot, therefore, but believe that similar results are capable of being achieved on man himself. Secondary inflammation can be absolutely prevented, and there is no risk to life from even extensive destruction of the cerebral hemispheres. In removing tumors or diseased cerebral tissue, no doubt healthy structures might be injured; but this would not necessarily cause mental disorder.

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[1] Vide 7th edition, Lect. viii., chiefly devoted to the subject, especially the latter part, page 57.

The triumphs of abdominal surgery, due in a great measure to advances in clinical and pathological science, and the correct appreciation of the physiology of abdominal structures and organs, have been followed by a great activity in the department of thoracic surgery. Surgeons now have the high authority of Dr. Ferrier to encourage them in untried efforts for the cure of cerebral disease by operation.

It may be said that trephining is a very old, and yet still a not very satisfactory practice; but hitherto it has generally been performed for the relief of some result of injury when deeper and more serious damage exists, or for the cure of a local condition implying, of necessity, more or less general disease of the brain. Tapping the pleura and Cæsarean section are also very old operations, practised long before thoracic and abdominal surgery had reached their present extended stage of dovelopment. They have been supplemented or superseded by operations performed with more deliberation, and not so often under conditions of emergency.

Through the labors of Dr. Ferrier, the future surgeon will probably perform with success operations which will bear the same relation to simple trephining as ovariotomy and Porro's operation bear to repeated tapping of ovarian cysts and Cæsarean section.—*British Medical Journal*, October 27, 1883.

Intestino-uterine Fistulæ and Artificial Anus.—Dr. L. H. Petit has recently written an elaborate article on this subject. The communications of the utero-vaginal canal with the small intestine, he says, are very rare. He has collected the records of twenty-three cases of ileo-vaginal and sixteen of intestino-uterine fistula.

Petit shows that of these cases, 14 followed strangulation of the intestine by rupture of the uterus or vagina; 18 cases followed pelvic phlegmon, which caused adhesions between the intestine and the vagina or uterus; in 2 cases an extra-uterine fœtal cyst opened at the same time into the intestine and uterus; in 4 cases uterine carcinoma had invaded the small intestine in the descending colon; and 1 case was doubtful, in that it could not be determined what point of the utero-vaginal or intestinal canal had been injured.

From an anatomical point of view these cases may be divided into simple fistula, and artificial anus properly so-called. The former follow adhesions of a loop of the intestine to the uterus or vaginal wall, from cancer or inflammation, only a limited opening being made in the intestinal wall; the latter are caused by strangulation of an intestinal loop in a rupture of the uterus or vagina, the whole circumference of the intestine being opened.

The symptoms of the two varieties are different. In cases of fistulæ there are intestinal irritation, escape of fecal matter through the vagina, but at the same time there are normal operations from the bowels. In the case of artificial anus there are symptoms of internal strangulation and the feces are passed through the vagina entirely. Differences are also seen in the progress, termination, prognosis, and treatment. Fistulæ gradually grow smaller, the feces pass in less and less quantities through the abnormal opening, and the case gets well, in the majority of cases, either of itself or after treatment consisting of vaginal and rectal injections, cauterizations and appropriate care of the patient. Artificial anus, on the contrary, does not tend to spontaneous cure, and it is only after the most persistent treatment, and operation that any cases get well.

As a rule, the diagnosis is easily made. It must be found out (1) whether the point of communication is in the uterine or vaginal wall; (2) if the rectum itself is implicated, or a higher portion of the intestinal canal; (3) if the lower portion of the intestine is permeable; (4) if the case is one of simple fistula or artificial anus; and (5) whether the lesion is of puerperal, cancerous, or what other origin. In making the examination, certain errors must be guarded against. Demarquay mistook the orifice of an artificial anus for the cervix uteri; and Radfort, an ileo-vaginal for a recto-vaginal fistula.

The prognosis is grave, in the sense that the affections causing the abnormal communications often cause death; but after the communications are once made, and the patient tided over the primary effects, the general state rapidly ameliorates, and the secondary effect, though very troublesome, is not incompatible with life. The treatment of these simple fistulæ consists in proper care, injections, tamponing the vagina, and cauterization of the opening. In vaginal fistulæ, the edges may be freshened and the opening closed by sutures. In the treatment of vaginal anus, the closure of the opening is only possible when there is no intestinal prolapse, and no spur (éperon), and when the lower portion of the canal is permeable. In cases of prolapsus, it is necessary to make a section and try to close the opening when the edges of the artificial anus have sufficiently approached a normal state to insure a passage of fecal matters after occlusion of the orifice. When there is a spur the enterotome must be used. When the lower portion of the bowel is obliterated, it is necessary to make a large communication between the upper extremity of the intestine and the rectal cavity. When these measures have been taken, the abnormal orifice may be sutured, after having been fastened. Occlusion of the vulva has been tried, without success. Gastrotomy has been proposed, in order to break up adhesions which may exist, and unite the two extremities of the intestine, but has not been tried.

When a vesico-vaginal and a fecal fistula exist at the same time, it seems to be advantageous to operate on both at the same time. Accidental communications of the small intestine with the uterus or vagina, of cancerous origin, tend to grow larger. They generally supervene at an advanced stage of the disease, and death soon carries off the patient.—*Ann. de Gynec.*, July, 1883.

Tannate of Sodium in Chronic Nephritis.—Lewin first recommended tannate of sodium in nephritis, and Ribbert's experimental researches demonstrated its action in causing decreased elimination of albumen.

Briese has used it, in four cases in Mosler's clinic, prepared as follows: ℞. Solution of tannic acid, 2 parts to 100; add solution of bicarbonate of soda (9 to 5) ad react. alcalin. S. Dose, one tablespoonful every half hour.

This mixture was not equally well taken by the patients. In some cases it caused gastric disturbances and vomiting. The daily quantity of albumen eliminated by the urine was not diminished, the nephritis went on, and the patients grew worse daily, and it was apparent that the remedy was, in these cases at least, of no value whatever.—*Centralbl. f. klinisch. Med.*; September 1, 1883.

The Value of Vaccination.—M. Jules Ferry has issued a circular, ordering the revaccination of all scholars in French public schools. This order is explained by the fact that it has been ascertained that, in those schools in which revaccination has been carried out, no case of smallpox has been known to occur for a series of years, the reverse being the case in many schools in which revaccination has not been carried out.—*British Med. Journal*, October 27, 1883.

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SATURDAY, NOVEMBER 17, 1883.

CICATRICIAL STRICTURE OF THE ŒSOPHAGUS: ITS CAUSATION AND MANAGEMENT.

In the *Journal of the American Medical Association*, for October 27, 1883, Dr. H. F. Campbell calls attention to not less than twelve cases of cicatricial stricture of the œsophagus due to swallowing strong solutions of lye, as well as to eight additional instances of ingestion of the same caustic fluid, of which four proved promptly fatal from œdema of the glottis, in three no bad result followed, and in one serious injury ensued. As all of these cases occurred within a circle of twenty miles from Dr. Campbell's residence, Augusta, Georgia, it is obvious that accidents of this nature are far more common than one would have supposed; and its explanation is to be found in the fact that solutions of "concentrated lye," which appear to be largely used in washing, scouring, and other cleansing processes, are carelessly left in exposed situations, and are accidentally swallowed by infants and children, who constituted at least nineteen of the cases alluded to, their ages having varied from eighteen months to six years.

With a view to remedy the growing frequency of these accidents and the fatality resulting from them, Dr. Campbell urges that the sale of "Continental Concentrated Lye," and "The Star Ball Potash," which seem to be the most dangerous agents of their class, be interdicted by legislative enactment, or that the manufacturers be compelled to stamp upon the packages containing the articles the word "poison," and, for the unlettered, the recognized warning against danger—the death-head and cross-bones. In justice to the manufacturers, it should be stated that these articles are intended for making soap, and not as labor-saving expedients for lazy mothers and servants; but as they will doubtless continue to be diverted from their proper application, it might suggest itself to the dealers also to label their goods, in the event of legislative action on the subject, "Lazy mothers are warned that solutions of these substances should not be kept, lest they be drunk by children, and death ensue."

Turning to the primary object of the paper, namely, the nature and treatment of stricture of the œsophagus resulting from chemical injury, we are pleased to find that the author of the paper insists upon the frequent, if not invariable, coexistence of spasm of the muscular fibres of the gullet with the organic lesion, through which the latter may be rendered impermeable not only to food but to the passage of instruments. It is well known to surgeons that comparatively few cases of cicatricial stricture prevent fluid ingesta, and it is equally well known that the contact of solid food or of instruments in such cases is quite sufficient to close the constriction completely. These attacks of tonic spasm not only mislead the practitioner, but, if frequent and long continued, result in the death of the patient from inanition. It is under these circumstances that cutting operations are not uncommonly resorted to, and, improperly so, since, under ether, it will be found that, in the majority of instances, the spasm will yield to proper instruments carefully introduced, their effect being to progressively lessen the spasm with each insertion, at the same time that they induce absorption of the new material, especially if it be recently formed. Hence in these cases gradual dilatation should be instituted as early as possible, and be persevered in until the easy deglutition of solids renders the resort to bougies and probangs less frequent.

Cases are, however, met with, in which the patient is on the verge of starvation. The coarctation is impermeable to instruments, and is rapidly becoming, or has become, so even to fluid food. In such examples Dr. Campbell avers that no cutting operation should be practised for the object of nutrition until after the failure of rectal alimentation, which he considers a far more valuable measure for permanently supporting the patient than the experience of other surgeons would warrant. While in cases of complete or almost complete occlusion, we are disposed to endorse his views as to the impropriety of internal œsophagotomy and œsophagostomy, we are far from willing to admit that gastrostomy is not applicable to the class of cases under consideration. In not a few instances, indeed, it is a precious resource to prolong life. More than this, by placing the parts at rest, dilatation may subsequently be resorted to with a prospect of success, when the gastric fistule may be closed. Had the operation been performed in some of the little patients that were permitted to die, a certain proportion would, in all probability, have been alive to-day. In a valuable article contributed to the American Journal of the Medical Sciences, for April, 1883, Mr. Morell Mackenzie refers to twelve gastrostomies for cicatricial stricture, in which the trouble had existed, on an average, for five months before the operation, and in which life was prolonged, on an average, for five months and a half. Le Fort has shown in the *Gazette des Hôpitaux*, No. 90, 1883, that five patients were living, respectively, at the end of four months and a half, eight, twenty, twenty-four, and thirty-six months, and that five died, respectively, at the end of seven, seven, eight, fifteen, and eighteen months after the establishment of the fistule, results which surely indicate that the operation is perfectly justifiable.

The final histories of eleven of the cases quoted by Dr. Campbell, of which, however, only four occurred in his own practice, show that five that had no treatment died, on an average, in a little more than six months, and that of the six that were subjected to gradual dilatation, and in which the measure was begun early, the longest period after ingesting the lye having been three months, four were more or less complete successes, one died at the expiration of eighteen months, the treatment not having been systematic, and one was living, mainly on fluids, at the end of sixteen months. All of the patients, except a woman, thirty-four years of age, were young children, a class of subjects difficult to manage on account of the fear of pain and the disinclination of parents to distress the child if anything whatever can be swallowed, to which may be added, in not a few instances, the timidity evinced by the average general practitioner in passing instruments.

MODEL ABATTOIRS.

Within recent years there has been a much-needed improvement in the manner of slaughtering cattle, in the construction and management of slaughter-houses, and in the methods of final disposal of the waste products of the business. This progress, however, has been chiefly identified with the abattoir system, private establishments for the most part still adhering to the old and defective methods. The difficulties in the way of regulating the construction and management of private establishments, so as to make them fully conform to a proper standard, and the obstacles encountered in instituting and maintaining systematic and scientific inspections, have been so great that reforms in this direction have made little or no progress.

In the light of this experience, efforts have been made to discourage the continuance of private establishments, and in their place to substitute the public abattoir system, which recommends itself as the only plan that has thus far met all sanitary requirements with respect to the lairage of animals, construction of buildings, management of the business, utilization of refuse, and which makes a daily inspection of all the details practicable. It is only by the adoption of this system, organized and regulated under the strictest sanitary supervision, that the public can feel confident that their interests are properly protected.

A very important movement in behalf of slaughter-house reform has been inaugurated in London under the name of the London Model Abattoirs Society. The objects of the Society, as stated at a recent meeting by the President, Dr. B. Ward Richardson, F.R.S., are the following: To establish in London a model slaughter-house, from designs of which others might be constructed; to advocate the erection of public abattoirs; to illustrate and teach the most rapid, skilled, and humane methods of slaughtering animals; to improve the method for the dressing of carcasses of animals, so that the flesh might enter the market in the purest condition; to insist on the importance of those engaged in slaughter-houses having proper conveniences for washing and cleansing themselves; to bring into use the completest means of removing offal, blood, and other organic substances, so that they might be moved with expedition; and to institute a systematic and scientific inspection.

Dr. Richardson is right in insisting on the necessity of replacing the private by the public slaughter-house or abattoir, on grounds of humanity, cleanliness, health, and economy. No better means could be selected for encouraging and giving force to this new movement than that adopted by the Society. Every one who is familiar with the present system is fully convinced of the grave character of its deficiencies. The lairage of animals is likely to be unsuitable and filthy; the slaughter-houses defective in construction and appointment, and therefore slovenly and dirty; blood-pits and storage receptacles neglected and foul; the slaughterers themselves unclean, and so likewise the storage department for the meat. The animals are made to suffer unnecessarily while waiting to be killed, are often cruelly and unsatisfactorily slaughtered, and the carcasses dressed and stored in an unwholesome manner. Without constant inspection, which is not possible under existing circumstances, these improper practices continue, and the meat is placed upon the market without ascertaining whether it is healthy or diseased. The facilities for removing the refuse matter are equally unsatisfactory, and for this reason, this material is not disposed of with sufficient promptness to avoid a nuisance upon the premises.

To get rid of these evils, which so generally prevail in all cities, the abattoir system must be endorsed, encouraged, and legislated upon if necessary. A number of our cities have already established public abattoirs, notwithstanding the opposition by parties interested in the survival of the old plan. The experiment has been most satisfactory, and deserves to be extended. A movement such as that inaugurated by the London Society would do much towards cultivating a better appreciation of the subject, and in hastening the general adoption of a system which has so much to commend it.

JAMES MARION SIMS, M.D.

The death of Dr. J. Marion Sims carries profound grief to the American profession. Not only in this country, but abroad, in whatever land true medicine lives, his departure will be mourned, for his fame and the influence of his teaching were almost world-wide. Sitting in the darkness of this sudden and great sorrow, it is natural to consider the work that he did in his busy life.

As there are epochs in the history of medicine with which famous names are associated, so there are famous names belonging to the special departments of medicine, names of those who have founded or greatly advanced those special departments. As the circulation of the blood suggests the name of Harvey, or pathological anatomy that of Morgagni, or obstetric anæsthesia that of Simpson, as vaccination always brings up the name of Jenner, or auscultation that of Laennec, so does gynecology—a department of medicine recent in origin—suggest that of Marion Sims; patient, brave, of restless activity; triumphant, noble man. He was a bold pioneer, opening new pathways; original, and with creative genius, he discovered for himself, and made his discoveries a gift to the profession. Even when unconsciously repeating what had been done before him, he greatly enriched the discovery, and carried the advance far beyond any predecessor. No matter what may be the great glory of those who have followed his footsteps, the best of them feel that they would never have accomplished what they have, had he not shown the way.

It is needless to say that before he faithfully worked out a method, the curing of genito-urinary fistulæ in the female was a rare exception, and now, thanks to his patient, self-denying labors, it is the rule. The best method of making uterine examinations he discovered and taught. He has done more than any man of his generation to teach not only the diagnosis, but also the most important surgical therapeutics of uterine diseases. Going to New York after many a hard lesson, after working out many a difficult problem unaided in his Southern home, and thus made strong in self-reliance, he gave an impetus to the study of diseases of women which must be felt long after his body mingles with kindred earth. The Woman's Hospital of New York, which owes its foundation to him, has been a school of the most valuable instruction to the profession; and that hospital has led to the establishment of similar institutions in various parts of the country, blessing those who are relieved in them, and blessing the profession, to whom they have been great centres of light. His treatise upon *Uterine Surgery* is one of the master-pieces of medical literature of the century. It has been translated into several foreign languages, and is found wherever there are educated physicians.

It would require much space to give even a list of the instruments Dr. Sims has invented for the diagnosis or treatment of uterine diseases. Many of these are found in the consulting rooms of all gynecologists, and in all hospitals where diseases of women are treated. If to-day all the publications of his pen and all the instruments of his device were destroyed, a great blank in gynecological science and art would be made, a blank that would remain for years.

He was a man constantly trying to add to his knowledge in his special department, and how cheerful and helpful to all who sought his advice! Of great personal magnetism, he was an inspiration to all brought in contact with him. But his inspiring power was stronger, wider than this; it was far-reaching, long-lasting, so that men who never saw him felt his influence, and were quickened through all their lives by his example and printed words; hearts as well as heads acknowledged his power.

Marion Sims, in many respects the greatest gynecologist of the century, has passed away, but he has left an undying fame.

SYPHILITIC PHTHISIS.

Although much has been said and written upon the subject of syphilitic phthisis, we are inclined to believe that many physicians have not a clear conception of what constitutes it. Dr. A. Sokolowsky has contributed a paper to the *Deutsche medicinische Wochenschrift*, for September 12, which points out with more than usual clearness the differences between this and the ordinary forms of phthisis.

There are two ways in which syphilitic disease manifests itself in the lungs, each of which is characterized by distinct clinical features:

1. In an otherwise favorable general condition,

and without other noticeable symptoms of syphilis, there appears in a circumscribed spot in the lung, more frequently in the right, a syphilitic neoplasm. In this limited area there are found the signs of consolidation and even of destruction of the lung, accompanied by slight cough, scanty expectoration, and rather disproportionate dyspnœa. On the other hand, the decided fever, perspiration, and diarrhœa of phthisis are altogether wanting. If, now, such a case, properly recognized, be treated with mercurials, complete recovery is possible. The cough disappears, the strength returns, and the local signs may entirely yield. The cases falling under this category are not, however, numerous.

2. In a second class of cases, including a decided majority, syphilitic processes set up in the lung in more advanced stages of syphilis, accompanied also by simultaneous, easily recognizable syphilitic lesions in other organs, as the larynx, liver, and aorta. This form corresponds very closely in certain of its clinical aspects with advanced phthisis. There are here also cough, emaciation, diarrhœa, and albuminuria. On the other hand, it is characterized by the total absence of fever. These very feeble, emaciated persons presenting the physical signs of destructive disease of the lungs and larynx have not fever, and if, from time to time, a slight rise of temperature occurs, it is never above 101.3° F., and exhibits not the slightest similarity to the hectic fever of phthisis. In strong contrast to this is the high degree of emaciation and debility, the pale, waxy, yellowish face being rather that of a patient with some malignant disease than that of a phthisical case. In like manner, night-sweats are either totally absent, or they are very trifling. Finally, the expectoration of blood is comparatively rare, at least very much more so than in common phthisis, while the dyspnœa is altogether out of proportion to the local disease.

In contrast to the cases of the first category, those of the second group, while they may be greatly improved by anti-syphilitic treatment—mercury and the iodide of potassium—never recover, the local lesions being almost unchanged, even while the general condition improves. Sooner or later, the patient perishes, with cavities in his lungs, extensive ulceration of the larynx, involving especially the true and false vocal cords, while the posterior wall is comparatively free, and with amyloid kidneys, liver, and spleen.

Such a sharply drawn picture as this should not be difficult to recognize, and, if correct, must be of material assistance in diagnosticating cases of syphilitic phthisis. We fear that syphilitic histories in cases of phthisis are too often overlooked in our examinations, and we believe that closer scrutiny and more accurate diagnosis might give more satisfactory therapeutic results.

COMA CARCINOMATOSUM.

Jaksch has recently reported (*Wiener med. Wochenschr.*, 1883, No. 17) the case of a woman who died after an illness of four months, in which gastric symptoms and emaciation were conspicuous. Seventy-four hours before death, she fell into a condition of coma accompanied by a peculiar dyspnœa and very deep, moderately frequent respirations. During the whole time the urine contained abundantly of diacetone and acetone. The autopsy revealed extensive carcinoma of the stomach, with numerous miliary metastases in other organs. Jaksch is disposed to consider these symptoms due to a poisoning of the blood by the acetone and diacetone, the well-known cause of coma in diabetes.

In order accurately to ascertain the whole truth and the exact views of the profession of the State of New York in reference to the Code controversy, the Central Organization of the New York State Medical Association, has just issued a proof-pamphlet of seventy-two pages, containing the names of all members of the profession in the State, classified by Counties, and then in accordance with their views on the Code question, as obtained by direct replies to inquiries, or from information obtained from the Secretaries of County Societies or others. It is intended to send this pamphlet for revision to each member of the profession whose address can be obtained, with the request to correct any error which may appear in connection with his name.

According to the most accurate information now at hand, there are 5219 physicians in the State, classified as follows:

Committed to the National Code, .	2,424.
" " New Code, . .	943.
" " having no Code, .	210.
Unclassified, ...	31.
Uncommitted, ...	1,611.

It is believed that the time has arrived for every member of the profession in the State of New York to declare himself for or against the National Code, and it is earnestly desired that those who are still uncommitted will speedily reach a decision, so that the views of the whole profession of the State may be obtained as to whether it wishes to retain its fraternal relations with the American Medical Association, and the regular profession of the United States, or to disfranchise itself therefrom by abolishing the National Code and adopting a new Code of Ethics not in harmony with it, or by abrogating all Codes.

SOCIETY PROCEEDINGS.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, November 1, 1883.

The President, R. A. Cleemann, M.D., in the Chair.

Dr. B. F. Baer related the following cases, the clinical histories of which present some points which he thinks are instructive and worthy of discussion. They are somewhat unusual in character, and it is remarkable that they all occurred within a period of thirteen days.

FORCEPS LABOR, FIFTH POSITION.

On October 17th, I was requested by Dr. —— to visit his patient, Mrs. H., who had been in labor thirty-six hours, prepared to perform craniotomy. She was a primipara, 43 years of age.

I found the patient nervous and exhausted, the soft parts dry and rigid, the os only partially dilated and the membranes ruptured many hours. The head, a large one, was in the cavity of the pelvis, and, whilst not impacted, it was nearly so. The larger portion of the head was posterior and to the left, the smaller portion, anterior and to the right. The fœtal heart-sounds were heard in the left lumbar region and nowhere else. I therefore diagnosticated a left occipito-posterior, or fifth position of Baudelocque.

I placed a vectis, and endeavored to assist rotation forwards, but failed to make any impression. I next adjusted, with some difficulty, Simpson's forceps, and by traction during uterine action, with gentle efforts at rotation, allowing the forceps to turn as the occiput rotated anteriorly, that process was finally accomplished in about two hours of hard work. I now removed the blades, and after finding that the head could not be otherwise delivered, I readjusted the instrument and assisted in extension of the head, delivering a living child said to have weighed twelve pounds. There was no laceration of the perineum. Both mother and child have done well. The case is interesting because of the age of the primiparous patient, and in the position of the occiput, which is rare.

ARM PRESENTATION; PODALIC VERSION.

On October 23d, Dr. —— requested me to see a patient with him, a girl sixteen years of age—a primipara at full term—in labor about twenty-four hours, and trunk presenting.

In general appearance she resembled more a child of twelve than a girl of sixteen. The external genitals and vagina were small and undeveloped. The abdomen was greatly distended, globular, and fluctuating. Palpation was of only negative diagnostic value, probably on account of the large quantity of amniotic fluid. But I thought I detected the head in one iliac fossa, and the breech in the other. Auscultation revealed the fœtal heart-sounds, feebly heard in the right iliac region. The upper portion of the vagina was distended by a large, protruding, "bag-of-waters," and the os uteri was fully dilated. I could only slightly touch the presenting part, which was entirely above the superior strait. I detected what I thought to be a limb, and from what I had learned previously by inspection, palpation and auscultation of the abdomen, I believed it to be an arm. I then dilated the orifice of the vagina preparatory to passing my hand, should that be found necessary, after rupture of the membranes, which I now did, and found a shoulder presenting and an arm on the verge of passing the os. This I arrested, and made version by the feet. I preferred this to version by the vertex, because I deemed it easier and less dangerous to both mother and child to effect delivery in that manner, than to apply the forceps in this special case. The child was alive, but feeble. The body passed through the narrow vagina very slowly, and only after pressure on the fundus of the uterus, until the head reached the floor of the pelvis. Here, by assistance, the occiput rotated forwards and the head was arrested. Flexion of the head could not be made to occur by supra-pubic pressure, and by pressure upon the nape of the neck, whilst a finger or two acted upon the anterior surface of the head through the rectum. I then quickly adjusted the forceps, and carrying the handles forward with the body of the fœtus, made flexion and delivered a living child. There was not the slightest laceration of the perineum.

The uterus did not contract well; and although ergot was administered, and time given for the organ to recover its tonicity (thorough kneading being used meanwhile), when the placenta was expelled a smart post-partum hemorrhage followed. This was easily controlled by the application of pure vinegar to the cavity of the uterus, injected by means of the long-nozzled uterine syringe, which holds about half an ounce. I prefer this method of introducing the vinegar to any other, for the reason that it is more easily and thoroughly applied. I carry the nozzle, guided by the index-finger, as in the introduction of the sound, into the uterine cavity, and project the vinegar, without force, over the surface. This can be repeated if necessary, which is seldom. Too much praise cannot be accorded Prof. Penrose for his earnest advocacy of the use of vinegar in the treatment of post-partum hemorrhage, the result of uterine inertia. In my experience, it has never failed to secure firm and continuous contraction, when properly applied. It is simple, antiseptic, and harmless.

ARM PESENTATION; PODALIC VERSION.

October 29th Dr. —— sent for me, stating that he had a case of shoulder presentation, that the membranes were ruptured, and the os only partially dilated. He had attempted to make version by the feet, and had brought down an arm in mistake for a foot. I found a primipara, æt. 22 years, illegitimately pregnant, at full term, feverish and excited. A large, fat right arm occupied the vagina, and the shoulder was jammed into and projecting through the os, which was firmly contracted around it. It was a dorso-posterior position, and the head was in the right iliac fossa. All the liquor amnii had been drained away, and the uterus was closed tightly around the child, which was apparently dead.

We administered ether, and I at once began an effort to bring down a foot, deciding that version by the vertex here could not be made, because the arm could not be returned to the uterine cavity, and, even if the arm had not been down, I feel sure that the bipolar force would not have been great enough to have brought that head to the superior strait. But to get through the narrow vagina and rigid os, which were filled already by the arm and shoulder, was one problem, and another, apparently greater one, was the turning of the large child in a contracted uterus. An attempt was, however, not only justifiable, but obligatory, for the sake of the child, of whose death we were not sure. Then, embryotomy, in a case of this character, would, I believe, have been attended with greater danger to the mother than version. I gradually inserted my hand and carried it into the uterine cavity, and with it I tried again to replace the arm, but failed. My hand was now so benumbed that almost all sensibility was lost. However, I finally reached the feet, selected the uppermost or left one, and began my efforts at version, assisting all my internal manipulations, of course, by placing the external hand on the abdomen, and acting with it on the opposite pole of the child. When I made traction on the leg, the arm advanced further into the vagina, and it now seemed that I should certainly be compelled to give it up, the difficulties appeared so great. But patience and perseverance are cardinal virtues here, and by exercising them to my utmost capacity, I succeeded in getting the foot and leg into the vagina, where I secured them with a fillet. I now gave this to Dr. ——, and whilst he made traction upon it, I pushed upon the shoulder, and succeeded finally in revolving the child on its long axis, causing the arm to ascend and the leg to occupy its place in the vagina. The remainder of the delivery was that of a difficult breech case, where traction on the child and pressure upon the fundus of the uterus are imperative. The child was dead. The mother reacted well, and has not presented an untoward symptom. There was slight laceration in the sulci on either side of the vagina, not through the cutaneous surface, and not enough to require sutures.

BREECH PRESENTATION.

Twenty-four hours later, on October 30th, my friend Dr. Wm. L. Taylor requested me to see with him Mrs. X., a primipara, thirty-five years of age, who had been in labor twenty-four hours, the breech presenting in the left sacro-posterior position. The membranes had ruptured twelve hours previously, the os was rigid, and only slightly dilated, and the breech was impacted in the superior strait, which seemed to be narrow. The patient was short of stature, fat, and had a small vagina. It was thought that the child was dead, but of this we were not sure.

Was there any use in waiting longer for nature to effect delivery? We decided that there was not, and, I believe, correctly. An attempt at traction was made by acting on the thigh, but it was futile. I passed my hand with great difficulty into the cavity of the uterus, which closely surrounded the child, and endeavored to reach a foot, but found that the legs were extended; and it was only after I had advanced my hand absolutely to the fundus of the uterus that I secured the desired member. The uterine cavity was now so rigid and full that it appeared impossible to flex the leg, and extend the thigh. But here perseverance again succeeded, and the leg was brought into the vagina. Delivery was finally consummated by the greatest effort. The child was dead, and from appearances had been so for some hours, as Dr. Taylor had suspected. The mother recovered, as after an ordinary labor.

PUERPERAL CONVULSIONS.

A few days before, October 21, there entered my service at the Maternity Hospital a girl, eighteen years of age, illegitimately pregnant, and near term. She presented a depressed appearance, and was pale and puffy from œdema. Her urine was examined at once, and found to contain a large quantity of albumen and some casts. Her labia minoræ were so œdematous that she walked with difficulty.

She was placed upon a treatment consisting of Basham's mixture, digitalis, laxatives, and warm baths, with good food. On the 20th, the nymphæ were so greatly distended that I feared obstruction to delivery, which was about to take place; I therefore made about a dozen small punctures over their surfaces. This was followed by a very free discharge of serum, so that in the evening the labia were reduced more than one-half. During the night, labor occurred, and she was delivered naturally at seven A.M. on the 21st, having been attended by my assistant, Dr. J. P. Pyle. There were no symptoms during the labor nor immediately after it to attract attention, but before leaving her, he administered thirty grains of the bromide of potassium as a safeguard.

At 9 o'clock he was hurriedly called, and found her just recovering from a convulsion. He at once sent for me, and began the administration of chloroform. But before I reached her, at 10 o'clock, she had had two more seizures, and just as I entered the room she went into another, which was one of the most terrific convulsions I have ever witnessed. I immediately opened a vein and allowed about sixteen ounces of blood to flow. I will confess that I did not want to take blood from this patient, because she was in such an apparently low condition. The bleeding did not seem to have the slightest effect, for very soon after it she had another convulsion fully as severe as the one preceding. Since the first attack there had been given, per rectum, twenty grains of the hydrate of chloral and forty grains of the bromide of potassium, and, per os, one-fourth of a grain of elaterium. But the convulsions continued to recur, unless the patient was kept constantly under chloroform, and coma was deepening with each attack. I now injected, hypodermatically, three-fourths of a grain of the sulphate of morphia. This was at 11.30 A.M. She did not have another convulsion, although no more chloroform was administered until 2 P.M. At this time she had a slight one, and at 2.30 another much more severe, when I repeated the dose of three-fourths of a grain of morphia. After this she had no more convulsions. The dose of elaterium was now repeated, and the kidneys stimulated by large doses of saline diuretics, administered by the rectum. The bowels moved freely and repeatedly soon after the last dose of elaterium was given, and the kidneys responded promptly; but the urine became nearly solid, when the test for albumen was applied, and casts were so numerous, and of such a character, that an unfavorable prognosis was pronounced by the competent microscopist who made the examination. The patient, however, came gradually out of the profound coma, but did not recover consciousness until nearly three days had elapsed, becoming at times wildly delirious and maniacal. As soon as she could swallow, I resumed the administration of Basham's mixture and digitalis, and on the next day added quinine and ergot, the latter especially to restore tone to the capillaries, and thus assist in improving the condition of the brain. Milk and beef tea were given largely. The patient will leave the hospital to-morrow, although her urine still contains albumen in considerable quantity.

If uræmia is ever the cause of eclampsia (which is not settled), this case presented the kidney state which is usually found in cases said to be of that origin.

Since it is *à propos*, I will relate a case which was probably not of uræmic origin, because the urine did not indicate the slightest disease of the kidneys.

PUERPERAL CONVULSIONS.

My friend, Dr. J. B. Deaver, asked me to assist him in the delivery and treatment of a case of convulsions. The patient was eighteen years of age—a primipara, and unmarried. The occiput was posterior and in the hollow of the sacrum. The first convulsion occurred after the head had passed the superior strait, and it was a very severe one. Dr. Deaver immediately bled, and very freely. Another convulsion occurred soon after the bleeding, although chloroform was administered and chloral given by the mouth. When I reached her, she had had three attacks, and was profoundly under the influence of the anæsthetic, and, of course, could not be convulsed in that state. I adjusted the forceps and delivered, with the occiput posterior, being unable to rotate it anteriorly. The anæsthetic was now removed, and not long after another violent convulsion occurred. I now injected two-thirds of a grain of morphia under the skin. She did not have another seizure, and made an uninterrupted recovery. As stated above, there was not the slightest evidence of disease of the kidneys, either before or after labor. The cause here was reflex—the patient being predisposed by a depressed mental condition, etc.

The first indication to be met in the treatment of puerperal eclampsia should be to control the convulsions. I do not think it will be gainsaid that the prognosis becomes less favorable with each recurrence. I believe that morphia, administered hypodermatically in a large dose, and repeated, if necessary, is one of the most efficient, if not the most efficient, means which we possess for that purpose. In the next case which I am called to treat I shall give one grain. I will bleed, if I think that it is indicated, and shall use chloroform; but I will certainly give the morphia. I will then attend to elimination through the bowels, kidneys, and skin. Dr. Clark, of Oswego, N. Y., first brought the morphia treatment before the profession, in a fearless and excellent paper, published in the *American Journal of Obstetrics* for January, 1880, which is worthy of study.

Dr. Elliott Richardson thought the extent of dilatation of the cervix a very important point in considering the advisability of version in shoulder presentations. When the fœtus is in a transverse position it cannot descend, and as the cervix dilates it slips upward on the neck and chest of the child, and thus puts the vagina in a condition of longitudinal tension and consequently of narrowing. Any sudden or extreme attempt at dilatation of the vagina, when in this condition, involves a great risk of laceration. In Dr. Baer's case the narrowness of the os uteri was a favorable circumstance for podalic version.

There is a wide difference in the treatment of puerperal convulsions, as practised in this country and in Germany. Carl Braun strongly discountenances bleeding, and recommends chloroform with the administration of benzoic and citric acids to assist the action of the kidneys. He considers that the prime object is to put the body at rest.

Dr. W. T. Taylor thought that, in Case 2, if the method of Dr. Wright, of Cincinnati, for the correction of the shoulder presentation by converting it into a vertex had been tried, the difficulties and dangers of a version by the feet might have been avoided.

He does not think bleeding should ever be omitted in the treatment of puerperal convulsions in plethoric patients. Bleed freely and give chloral in large doses by the rectum. He thinks the use of opium should be preceded by bleeding.

Dr. Alfred Whelen has tried one-quarter grain of nitrate of pilocarpine hypodermatically after bleeding; the result being successful. The use of the pilocarpine did not seem to be followed by serous effusion. In one case in which no treatment of any kind had been used, an autopsy showed all the serous cavities filled with effusion. He thought the arterial tension, consequent on the convulsion, was the cause of the exudation.

Dr. R. A. Cleemann had tried all plans, and none of them were certainly successful; every method would fail at times, and any method will be followed by recovery. He thinks bleeding should be tried in every case to remove the vascular tension which is the great source of danger.

Dr. B. Trautmann had under his care a primipara, plethoric, who was suffering from puerperal convulsions; she was bled, a large dose of calomel was given, chloral was administered, and pilocarpine was injected, but all without effect: the patient died. In another case the urine contained fifty per cent. of albumen with casts, and no convulsion occurred. What is the relation between albuminuria and convulsions? Is the origin of the convulsion in the nervous system, and the albuminuria a result?

Dr. H. F. Beates.—The presence of urea in the blood being generally considered a prime factor, most of the forms of treatment have reference to its elimination. Bleeding should be very free to act in that manner, and if it is prompt and free, it will be followed by improvement; pilocarpine acts as an eliminator of urea, by the skin, thus relieving the kidneys and the system. He had treated two cases by this method, and both had recovered.

Dr. Philip M. Schieat had recently under his care, a primipara, aged 25 years; she had convulsions for four hours; chloral and bromide of potassium had been given freely, but with no effect; a hypodermatic injection of three-quarters of a grain of morphia sulphate was followed by quick relief; she was very plethoric, but there was no need for bleeding after the use of the morphia.

Dr. Baer, in Case 2, had considered version by the vertex, but thought that he could deliver more quickly and with less danger to both child and mother by means of podalic version. He considered elimination a false principle in the treatment of puerperal convulsions. First stop the convulsions; eliminate afterwards if there be any necessity for it. How much elimination can be effected by drawing twenty or even forty ounces of blood? The majority of these patients need all of the blood they have; they have none to spare. There is a neurasthenia at the bottom of these attacks. The patients are generally nervous and depressed from circumstances connected with their physical and social condition. Dr. Penrose, in his lectures at the University, taught bleed—bleed—every case that was bled sufficiently, got well; every case that was not bled died. Dr. Carson's lecture followed immediately after that of Dr. Penrose, and he was as bitterly opposed to bleeding as Dr. Penrose was enthusiastic in its advocacy. He has been afraid of pilocarpine, because its action, once established, cannot be controlled; he thinks, however, that the effusions observed have been caused by the convulsions, and not by the remedy. Morphia, used hypodermatically, is the remedy upon which he puts dependence; it will control the convulsion. Any medicine administered by the mouth or rectum must be of slow and uncertain action, because of the slowness of absorption from the alimentary tract.

Dr. Beates reported a case of

DIPHTHERITIC PARALYSIS

in a child of eight months. The muscles of the neck were affected, and resulted in extreme flexibility of the neck, the head rolling all about. Death resulted apparently from paralysis of the phrenic nerve.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, October 12, 1883.

The President, Dr. William J. Morton, in the Chair.

Dr. Leonard Weber read a paper on

THE NEUROTIC ORIGIN OF PROGRESSIVE ARTHRITIS DEFORMANS.

Having briefly recapitulated the symptomatology and etiology of arthritis deformans, the reader proceeded to develop his personal views concerning the nature of the disease in question. He said that among the comparatively large number of cases of arthritis deformans he had seen in the course of the last twenty years, he could not but recognize sorrow and grief, fright, irritation and exhaustion of nerve-centres by sexual indulgence and a dissolute life as leading factors, just as potent in producing the disease as rheumatic influences, if not more so. Again, remembering the symmetrical appearance and progress of the disease in most cases, no more plausible explanation seemed possible than the supposition of causes located in the central nervous system. The neuralgic and trophoneurotic symptoms also supported this view, though it was not to be forgotten that in a spine stiff and deformed by arthritis, there might easily occur changes of innervation, producing neuralgias and trophoneurotic changes secondary in character.

Finally, the negative results he had had in treating polyarthritis deformans after the usual anti-rheumatic method, with iodides, colchicum, etc., and, on the other hand, the very positive results obtained in similar cases by the galvanic treatment of the central nervous system, combined with a generous diet and the persistent administration of cod-liver oil and iron, led him to believe in the neurotic origin of the disease in many cases. It was through the repeated failure of the old method that he first became convinced of the erroneousness of the conventional opinion of the rheumatic or gouty origin of this formidable malady. Up to the present, no autopsies had been made with reference to the condition of the nerve-centres in this disease, and it would be a fit subject for future research to find the changes in the cord, presumably in the anterior horns, which might induce certain forms of arthritis deformans.

With regard to the main features of the disease, he had this to say, as a rule, it began and developed very slowly, without any other symptoms, at first, but pains in one or more joints, which came and went either spontaneously or after exertion. Not infrequently the patient complained at this early stage of an unusually tired feeling in the joints. The pains were neuralgic in character, circumscribed or diffused through the limb. In the peripheral form, the joints of both hands and feet; in the central variety, the hip, knee, and spine were the parts affected. In the course of time a great deal of stiffness and discomfort was experienced. The joints became enlarged, and became unshapely by the proliferation of hard, osseous protuberances on the outer surface of the swollen epiphyses, and creaking or cracking in moving or palpitating the joints was perceptible to the patient as well as to the physician. The adjacent soft parts, particularly the muscles, showed in a comparatively early stage of the disease a degree of atrophy not at all commensurate with their passive condition alone, but much more likely due to peculiar nutritive changes of neurotic or myotic origin.

In the peripheral form the disease affected the joints almost always symmetrically; in the central form, the advance was irregular. In one case he had seen it remain stationary in the hip-joint for many years, but attacking some joints of the fingers and toes at last. In another case, a female patient about thirty-five years of age, the upper part of the body only was affected. He has now a case under observation where nearly all the joints of the body were badly affected when he first saw the patient, who had been a helpless cripple for many months. The disorganization of the shoulder, knee, and particularly the hip-joint, leads often to a considerable shortening.

In one of his cases still under observation, the shortening of the lower limb amounted to nearly three inches.

In the spinal vertebræ ankylosis was more quickly developed by the disease than in other parts of the body. One of his patients could neither bend nor turn her head when he first saw her, the entire spine being stiff, but there were no symptoms of compression or even remarkable irritation of the cord. The disease was slowly but steadily progressing; while it might remain stationary for a length of time, exacerbations were sure to follow. Fever or other great constitutional disturbances he had not noticed in its course. In a female patient, æt. 37, he found the urine to have a specific gravity of 1026, containing some sugar and phosphates in abundance. Her mother had diabetes, and was a sufferer from arthritis deformans at the same time.

The following cases were selected from his records as illustrative of the points he wished to bring out.

Case I.—Mrs. M., æt. 47, American; no syphilitic or hereditary taint, but sister is reported to be a sufferer from chronic rheumatism. Married early in life; went on the stage, and, as a somewhat prominent actress, led an active and varied life, experienced many changes of fortune, travelled a good deal, and never hesitated to expose herself to wind and weather, yet always enjoyed good health until two and a half years ago, when, after a premonitory period of worry and depression of spirits caused by the loss of the last piece of property she owned, she experienced pains in both wrists and elbow-joints, followed by swelling and distortion of the same. Hands and feet soon followed, and when I saw her first, on Feb. 27, 1883, she had not a joint that did not creak or crack or was not out of shape, except those of the clavicle and the lower jaw. The knees and spinal vertebræ were in the worst condition and the most painful. Standing or walking, even with support, was out of the question. Her urine contained phosphorus; no albumen. Sleep and general nutrition bad; bowels irregular; no treatment had so far done any good, but the disease had made rapid and steady progress. Ordered to take of propylamine (trimethylamine) ʒj, aq. ℥viij, oleosacch. cibi ʒij, a tablespoonful ter in die before, and two pills of ferr. sulph. and potass. carbon. after, each meal; good food, and a tablespoonful of cod-liver oil three or four times a day. Galvanism to spine and the cervical ganglia of the sympathetic three times a week. The local and general improvement has been so satisfactory that she is now able to get up and around with the help of a cane, and to do light work with her hands. The pain and swelling and distortion of joints are much less; sleep and nutrition greatly improved.

Case II.—Mrs. K., æt. 34, German; married twice, had two still-births and two abortions; second husband had syphilis, and died of phthisis. Patient presents no signs of either disease; no hereditary influences. In 1877–78, severe attacks of bronchitis that troubled her the whole winter, but eventually got well without any apparent damage to the lungs. After some years of trouble, anxiety, exposure, and want, a deformans broke out two years ago, with pain and swelling of small joints of hands and feet, soon spreading to one knee, shoulder, and hip-joint. The disease was preceded by severe headaches, from which she suffers yet occasionally, but less violently. Some of the joints present a gelatinous feel, and several nodules of the above description can be felt beneath the integuments of her arms. No pain on pressure over sternum, clavicle, or tibia. Neither specific nor anti-rheumatic treatment, so-called, was of any service, but the disease has been very tardy in its progress, and the disfigurements of the joints are not to be compared to those of Case I. She has always been able to walk, though not without pain, and from time to time has been confined to her room. Appetite and general nutrition not good. The treatment described in Case I. was commenced in January, 1883, and carried out pretty regularly up to the present time, except as to the application of electricity. The result thus far has been satisfactory; further progress of the disease has been stopped; pain, swelling, and disabilities of locomotion are much less.

Case III.—Mrs. K., æt. 35, American, married, multipara. Father in good health; mother suffering from diabetes and arthritis deformans. Patient well built and nourished; living in good circumstances; has been for some years very unhappy in domestic relations, and been often deprived of rest and sleep, and been otherwise maltreated. After a series of premonitory symptoms, such as hemicrania and neuralgia in the upper extremities, she showed the first symptoms of the disease in the joints of fingers, wrists, and shoulders about a year ago. Her urine contains phosphates (largely) and a little sugar. The affection has made no great progress as yet, and the treatment has not been carried out well enough to be of great service, owing to the irregular attendance on the part of the patient.

Case IV.—Mrs. H., æt. 55, multipara; no hereditary taint; no apparent cause beside a good deal of anxiety and grief on account of the persistent ill-behavior of her only son. First symptoms in small joints of fingers and toes, five years ago. So far she has not experienced any great inconvenience from her affliction, but as often as she makes up her mind to take the propylamine mixture and cod-liver oil for some time, great relief follows as to pain and swelling.

Case V.—Mrs. S., æt. 65, German, married, multipara; no hereditary taint, but a good deal of exposure to rheumatic influences in her younger days. First attack in her right hip-joint, fifteen years ago, which led, in the course of time, to a shortening of nearly three inches, and now to complete ankylosis. No other suffering until recently, when several small joints of her hands and feet became affected, and she had to take to her bed. Various sorts of cures were applied, to no purpose; for the last three months she has taken propylamine and the compound syrup of the hypophosphites, with the result that she is able to be about again, and that no other joints have been attacked.

Case VI.—Mr. G., æt. 60, Austrian, clergyman, single; of good constitution, and no hereditary taint. He served as a missionary in his prime; travelled extensively in South and Central America. He was, of course, exposed to the severe effects of unhealthy climates, and suffered many hardships besides. He had several attacks of rheumatism, of which he got well, but eight years ago it settled in his right hip and left knee; and when I first saw him, five years since, he was in constant agony, confined to his bed for many months, and the above joints presented all the symptoms of advanced arthritis deformans. Some of the joints of his hands and feet had also become recently affected. His urine contained albumen in considerable quantities; there were amblyopia—the ophthalmological examination showing the affection of the retina often found in Bright's disease—and atheroma.

By the use of the iodides and other remedies, he was but little relieved; but two seasons at the hot springs of Virginia removed the severe recent affections of the joints, relieved his kidney trouble, and considerably improved his eyesight. The old affections of hip and knee remained as before, but ceased to give him much trouble, so that he was able to be about and attend to his clerical duties.

Dr. E. C. Wendt, in opening the discussion, said that he had seen a number of cases of arthritis deformans, mostly in hospital practice, all of which had, under the usual plan of treatment, gone on from bad to worse. He had also seen one of Dr. Weber's cases, in which a marvellous result had been obtained, in a comparatively short time, by an entirely different plan of treatment. He thought the value of Dr. Weber's interesting paper lay mainly in the therapeutic suggestions which it contained. If other observers corroborated the ideas here advanced, a decidedly progressive step would have been taken. He thought it was important to elucidate the causation of the disease: mere symptomatic treatment was quite irrational.

Dr. Dana remarked that the few cases seen by him had not illustrated the neurotic origin of the disease. In New York, he was of the opinion that the disease was rarely met with in private practice. He had seen only a few cases in hospital and dispensary service; this was even true in the Marine Hospital for Sailors, where rheumatism abounded. He recollected having seen one aggravated case: the patient was an old woman, some seventy years of age, who had suffered from the disease for sixteen or seventeen years. It began in the vertebral column, and gradually involved the hips, knees, and toes. She was so helpless, that in order to evacuate her bowels it was necessary to place her in the horizontal position over a pail. The patient had Bright's disease and died of apoplexy. Upon post-mortem examination, deposits of urates were found in the joints of the great toes. The patient was poor and surrounded by all the conditions favorable to the development of the disease.

Dr. Dana said he had seen some women of a neurasthenic type, women who had suffered from functional nervous disturbances, who developed a kind of inflammatory swelling of the fingers, so that in one case the hands became almost useless. He did not know but that later on in life these cases might develop into arthritis deformans; and, if so, they would illustrate the theory advanced in the paper. In considering neurotic inflammations of joints, Dr. Dana thought the relation of the trophic nerves to them, if there are any trophic nerves, should not be lost sight of. Never, so far as he knew, have we found any articular disease following functional nervous trouble. The nervous difficulty must be organic. In no experiment upon animals, except where an organic lesion of the spinal cord has been produced, have we been able to produce arthropathies.

Dr. Wendt did not know that the author's paper contained any evidence that the disease was developed from an organic lesion of the spinal cord. If there had been such grave central disease of the spinal cord, improvement could not have been so rapid. He thought the neurotic condition was not the ultimate, but an intervening cause. If we would go back still further into the history of these cases, he thought we would find that there was first a disturbance of nutrition, after which the neurotic condition developed.

Dr. Burrall wished that he could add something to our knowledge of this subject. The disease was one we were continually meeting. It seemed to him to be an arthritis resulting from trophic changes. In two cases which he could now call to mind, these changes resulted from worry. One case had gouty trouble. There was no uric acid found in the urine of patients suffering from arthritis deformans. As far as therapeutics were concerned, he knew of only two remedies. The two remedies he would hope to derive beneficial results from the use of, were arsenic, which is a nerve-tonic, and eupatorium perfoliatum (boneset).

The President felt like adding a word in regard to the practical part of the paper. He had not seen many cases of arthritis deformans in private practice; he could only recall five. It was probable that most cases were seen by the general practitioner. In the first four he had met with unsatisfactory results; but in the last, becoming convinced of the fruitlessness of the anti-rheumatic plan of treatment, he had administered cod-liver oil, iron, and static electrization, with great benefit to the patient. He was of the opinion that the disease occurred most frequently in the so-called neurasthenic.

It was interesting to note that the first advocate of the neurotic origin of the disease was an American, Dr. J. K. Mitchell, the father of Dr. S. Weir Mitchell, of Philadelphia. At a very early date, 1834, Dr. Mitchell announced it as his theory, that acute, subacute, and chronic rheumatism were diseases of the spinal cord. The neurotic theory of the origin of the disease in certain subacute forms was a very attractive one. He was prepared to admit, as an argument in its favor, that the ordinary anti-rheumatic treatment fails to relieve the patient. In the next place, there is a well-understood relationship between the disease in question and well-recognized nervous ailments. We have only to call to mind the arthropathies of the myelitis of traumatic neuritis and of certain hemiplegias, to find a defensible relationship to the changes in the joints characteristic of arthritis deformans.

Dr. Dana remarked that, as interesting as it might be to claim the theory of the neurotic origin of arthritis deformans for America, it was difficult to see how the information afforded by the President's remarks made it clear that such really was the case. The author of the paper had laid special stress upon the idea that arthritis deformans was an essentially different disease from acute or chronic rheumatism. Hence Dr. Mitchell could not be credited with the origin of this theory, as his claims concerned only acute and chronic rheumatism.

The President did not think that Dr. Mitchell's claims were thus narrowly restricted. It was doubtless true, however, that these claims should not have covered all forms of rheumatism as known at his day.

Dr. Durrall incidentally called the attention of the members of the Society to the fact that there was at the present time a case of Charcot's disease in the wards of the Presbyterian Hospital of this city. Dr. Charcot claims that Dr. Mitchell was the first to associate joint disease with the central nervous system.

Dr. Weber, in closing the discussion, said that he was glad to have learned, from the remarks which had been made, that it was well to have brought the subject before the Society, and that he had come forward none too soon with his views upon the subject.

NEW INVENTIONS.

A NEW AIR COMPRESSOR FOR THE ATOMIZER.

By CARL SEILER, M.D.,

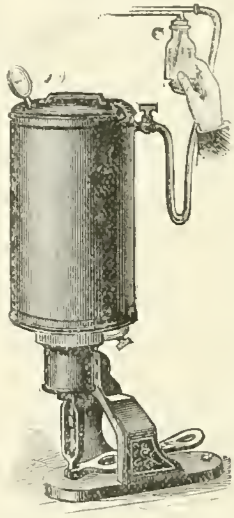
INSTRUCTOR OF LARYNGOLOGY AND LECTURER ON DISEASES OF THE THROAT AND NOSE AT THE UNIVERSITY OF PENNSYLVANIA.

The use of atomized liquids in the treatment of diseases of the upper air-passages has become of late almost universal, and has in a great measure supplanted the older methods of applying remedies to the mucus membrane of the throat and nose; and in modern surgery the carbolic acid spray plays an important part. This atomization, or spray, as it is commonly called, is produced by forcing a current of air, or steam, through a tube, which, in passing out from the small opening at the end, rushes past the opening of another tube, the end of which is below the level of the liquid to be atomized. In doing so the current exhausts the air in the second tube, thus causing a rise of the liquid until it appears at the opening, when it is carried along with the current of air in a finely subdivided state; or else the tube is fastened air-tight into a vessel containing the liquid and the air is forced by another tube partly into the bottle and partly into the upper end of the tube. The pressure of the air within the vessel causes the liquid to ascend, and, coming in contact with the air-current, is carried out of the contracted end of the tube in the form of a spray.

The air-current should be a continuous one, and it is therefore necessary to compress the air in some convenient chamber, whence it flows through the atomizing tube. This is accomplished in a variety of ways, the most common of which is the well-known double-bulb atomizing hand-ball, made of rubber, or the force may be obtained from a small steam boiler, as is the case in the steam atomizer.

The hand-ball has the great disadvantage that the operator has both hands employed, one in holding the tube and the other in working the ball, so that he cannot direct the spray in the desired direction, nor control the motion of the tongue of the patient; and further, that the long-continued use becomes very fatiguing to the hand working the ball. The steam atomizer, besides being very complicated and easily deranged, cannot be used to throw the spray downward into the larynx nor upward into the naso-pharyngeal cavity.

Having experienced these difficulties for many years in my practice, I was grateful when, three years ago, I obtained from Mr. J. Elliott Shaw a Burgess air compressor, which ever since has given me great satisfaction. This apparatus, which is easily worked, compact in form, and light in weight, is in its general form shown in the cut. It consists of a small air-pump worked by a treadle and surmounted by an air-chamber. The pump cylinder is made on an arched stand, and contains a piston having a valve opening upward. The piston is connected to the treadle by a forked connecting rod, and is moved by a slight and easy motion of the foot. The upper end of the pump cylinder is closed, with the exception of a valve aperture opening into a small or sub-air chamber, which is securely attached to the large air reservoir made of heavy tin, and which is nine inches in diameter and fourteen inches high; connection is made between the sub-air chamber and the reservoir by a small brass tube, the air being admitted or confined by a stop-cock. Near the top of the reservoir there is another stop-cock, to which is attached a flexible rubber tube leading to the atomizer. In the upper end near the edge of the reservoir is secured a small spring pressure gauge, indicating by the movement of its hand on the dial the pressure to the square inch of the air contained in the apparatus —from one to twenty pounds. The whole instrument stands thirty-two inches high and weighs sixteen pounds.



Thus from this description it will be seen that we can compress the air to any desired pressure under twenty pounds, and draw it off from the reservoir as it is needed for making applications to the throat or nose with the atomizer, replenishing the air by a little pumping when the pressure gets too low; and I have found that when filled at a pressure of from ten to twelve pounds there is enough air to give a spray, with a good atomizer, for ten minutes, or to make application to three or four patients in succession without pumping. When used for the carbolic acid spray, a gentle movement of the treadle will keep up the current at the desired pressure for an indefinite length of time, and in this respect the apparatus is superior to the steam atomizer, for in it the water in the boiler becomes exhausted very soon and must be replenished, causing an interruption of the spray for several minutes.

OBITUARY.

James Marion Sims, M.D.

It is with feelings of profound sadness that we announce the death of Dr. J. Marion Sims, which took place, suddenly and unexpectedly, on Tuesday morning last, November 13th, at his residence in Madison Avenue, New York. His health had been somewhat delicate for some time past, indeed, ever since the severe attack of pleuro-pneumonia two years ago, which came very near carrying him off; but no one could have supposed from his appearance that his life's end was so close at hand. He had been busily engaged for some days past in making his preparations to sail for Europe next Saturday to spend the winter abroad, and it was only the evening before he died that he made some professional calls. In the early morning he awoke, and after writing a few lines and taking a drink of water, he lay down and, apparently, was soon asleep. He breathed heavily, however, and his wife presently perceived that there was something wrong about him, and before she could summon their son, Dr. Harry Marion Sims, life was extinct. An autopsy showed the immediate cause of death to have been a degeneration of the muscular fibres of the coronary artery, with sudden obstruction of the circulation.

The demise of this great and good man will fall like a pall upon the heart of the American medical profession, of which he was so great an ornament, which he enriched so much by his labors and his genius, and by which he was so universally beloved and venerated for his many noble qualities. His loss will be deeply felt and will excite widespread sympathy. When such a person dies the world is conscious of having lost a man. When the history of American medicine shall be written, one of its brightest pages will be the account of Dr. Sims, a name of world-wide fame, as enduring as the hills and valleys of South Carolina, his native State.

Born on January 25, 1813, in Lancaster District, he received his English and classical education in the South Carolina College, at Charleston, and then studied medicine, graduating from the Medical College of the Palmetto State in 1832, and from the Jefferson Medical College in 1835. Thus equipped with a more than ordinary amount of knowledge, and impelled by a lofty ambition to excel in his profession, he selected Montgomery, Alabama, as his future home, and it was there, in the midst of genial and appreciative friends, in a delightful cotton region, blessed with a charming climate, and enlivened by the song of the mocking bird, that he laid the foundation of his future fame and usefulness.

Meeting with several cases of vesico-vaginal fistula, which had repeatedly and in vain appealed for relief to other practitioners, it occurred to Dr. Sims that an operation might be devised, by which a permanent cure of this distressing affection might be effected. For this purpose he opened a private hospital with a capacity of sixteen beds, conducted solely at his own expense. His patients were all young colored slaves, all primiparæ, who, as they were of no use to their owners, willingly placed themselves under his charge. He had, strange to say, originally no fancy for obstetric and gynecological practice. His practice was of a general nature, largely, however, partaking of surgery.

The first two or three cases of vesico-vaginal fistula that came under his observation were summarily dismissed, because, from all he had seen and read upon the subject, he considered the affection as utterly incurable. A third case, brought to him soon after the last, would have shared a similar fate, had it not been for a circumstance that changed the whole tenor of his life, by inspiring him with the thought which thus enabled him to lay the foundation of gynecology, of which he will, in all time to come, be regarded as the scientific father. A lady fell from her pony, and striking the sacrum, dislocated her uterus, causing intense agony. Called almost immediately after the accident, he placed her upon her knees, so as to elevate the pelvis, and depress the head and chest, and he found, to his surprise as well as joy, that the organ at once returned to its normal position. New light had burst upon his vision in reference to the operation for vesico-vaginal fistula; atmospheric pressure, with the slight aid of his fingers, had done the work, and he was not slow to take advantage of what proved to be a most important discovery. He now set about inventing new instruments, new needles, and new sutures, for the more secure closure of these horrid and disgusting fistulæ. Sims's speculum is used in every part of the civilized world, and silver sutures enjoy an equally great popularity, although they are not indispensably necessary to the success of such operations.

He now had often half a dozen cases of vesico-vaginal fistulæ under treatment in his little hospital at one time. In a letter, written November 6, 1882, he says: "When I began this work I was thirty-three years old, full of life, energy, endurance, and enthusiasm. I was so sure that I could cure every case in a few months that I proposed to the masters of the unfortunate young women to keep them at my own expense if they would clothe them and pay their taxes, and promised not to do anything that could endanger their lives or render their condition worse. As they were entirely profitless to their owners, I easily got control of them, and they were only too happy to come with the hope of getting rid of their disgusting infirmities. Keeping so many patients at my own expense for four years impoverished me, and, what rendered matters worse, my own health gave way. Convinced that I could not obtain relief in the South, I was compelled, in 1850, to go North. When I reached New York, I weighed only ninety pounds, and my disease harrassed me until 1856. I may mention the fact that when I began my experiments, my professional brethren in Montgomery were all ready to come and help me, for they thought with me that I was on the eve of a great discovery; but, when they saw only failure after failure, they became tired of it, and in the third and fourth years I could get hardly any one to help me. During the last year my principal assistants were the patients; and they had always eagerly looked forward to the time of having their operations repeated, often contending with each other who should be next. All the operations were performed without an anæsthetic. Indeed, I had been at work a year before the introduction of ether."

Thus, at length, in 1849, after many trials and failures, Sims triumphed over all obstacles and placed his method upon a scientific and enduring basis. Upon one of his patients he performed not less than thirty operations, before he finally succeeded in effecting a complete riddance of her loathsome infirmity. It is difficult to say which most to admire in this case, whether the fortitude of the poor sufferer, or the patience, perseverance, and skill of the great surgeon. It affords an example of sublime devotion, of which history records but few instances. Dr. Sims published the first account of his operation in The American Journal of the Medical Sciences, for January, 1852. It was prepared while he was confined to his bed, at a time when he was considered hopelessly ill. It speedily attracted universal attention.

In 1853, Sims removed to New York, where, during the following year, he founded the Woman's Hospital, the first institution of the kind on this continent, exclusively devoted to the treatment of the diseases of women.

In this undertaking he was aided by the powerful influence of Mott, Francis, Stevens, Griscom, and other celebrities, as well as by a number of the most respectable ladies of New York. If Sims had done nothing else, the energy and determination displayed in placing this institution in a proper working condition would be sufficient to entitle him to the gratitude of the public, and to establish his claims as a wise philanthropist. During his early connection with it, it afforded him an opportunity of introducing his peculiar operative procedures, and the profession and the public an opportunity of forming a true estimate of their value.

In 1861, Dr. Sims visited Europe, and during his sojourn in Paris was invited to perform his operations in the principal hospitals of that city, the great surgeons, men of world-wide renown, sitting as pupils at the feet of the American Gamaliel to be enlightened respecting a procedure which was completely to revolutionize the treatment of the surgical diseases of women.

The following year he took his family abroad with a view of educating his children; and availing himself of the reputation won during his first visit, he soon obtained a large and lucrative practice, patients flocking to him from all parts of the Continent, Great Britain, and even the United States. During his absence, extending into 1868, the French, Spanish, Portuguese, Italian, and Belgian governments vied with each other in investing him with their decorations. Napoleon III. made him a Knight of the Legion of Honor, and the Belgian Government conferred on him the order of Leopold I., while many of the most prominent medical societies enrolled him among their members. During the Franco-Prussian war Dr. Sims rendered important services at the head of the Anglo-American Ambulance Corps, for which he and his assistants received the thanks of the French Government.

At the meeting of the American Medical Association in Louisville in 1875, he was elected President of that body, and delivered his inaugural address the following year at the meeting of the Association in Philadelphia.

Dr. Sims has found time to contribute numerous articles to the periodical press, and to publish monographs on "Silver Sutures in Surgery," "Uterine Surgery," "Ovariotomy," "Intra-uterine Fibroid Tumors," "Trismus Nascentium," and "The Microscope in the Sterile Condition."

Of late years, owing chiefly to ill-health, his life was a nomadic one, most of his time being spent in Europe, where he was always sure of a warm welcome, greeted by crowds of wealthy patients, including not a few of the nobility. In 1880 he had a violent attack of pneumonia, from the effects of which he was very long in recovering.

Dr. Sims was one of the most generous and hospitable of men; with genial, winsome manners, with a mind of keen perceptions, well-stored with varied information. He was a fond and loving husband; a fond and loving father.

NEWS ITEMS.

Yellow Fever in Mexico and on the Border.—The Consul at Guaymas, Mexico, in a letter to the State Department dated October 23d, says that the yellow fever is slowly diminishing at that place, only twenty-one deaths during the month to date, and but two new cases in past twenty-four hours. It is also abating at Hermosillo, only one death in the past twenty-four hours. He stated that the ports of La Paz and Mazatlan are now free from the scourge, and that clean bills of health are given to vessels clearing from those ports.

The Deputy Collector of Customs at Yuma, A. T., in a letter to Surgeon-General Hamilton, dated November 2d, says that, in his opinion, next season will be the dangerous one for that coast, as the germs of the disease were brought in by persons contracting it in Sonora and dying in Arizona. He also says that two distinct fevers coexisted in Sonora at the same time—the epidemic form being the specific yellow fever. He adds that the disease was very successfully treated by the use of an emetic composed of an infusion of the inner bark of the mesquit tree and a little common salt—"in each case the fever subsided rapidly and the patient was restored in a few hours."

Daily reports up to the 31st of October from Sanitary Inspectors W. F. Price, at Yuma, and W. E. Chesley, at Benson, A. T., show that no cases of yellow fever entered those places by rail, nor were there any arrivals from infected points in Mexico.

Assistant Surgeon Main reports, under date of Oct. 31, from Brownsville, Texas, the continued good health of that place and of Matamoras, Mexico. He says, however, that, owing to a tornado at Altala, in Mexico, the death-rate from yellow fever was greatly increased in that place, and gives the total number of deaths from the scourge to have been 1981, and in the adjacent villages not less than 3000. He adds that the above is no exaggeration, as the treatment of the sick was *nil*. In Mazatlan the mortality is given—deaths in the city, 1821; in its vicinity, 4000. At Acapulco, no definite account of the mortality could be obtained, but the fever was regarded as an endemic disease at first, and not until the death-rate became alarming were any sanitary measures inaugurated for arresting the disease. As this city is one of the principal sea-coast ports of the Pacific whose commerce is chiefly with the city of Mexico, a source of great danger to the interior may result from yellow fever epidemics at this place.

Yellow Fever at Havana.—Sanitary Inspector D. M. Burgess, in a report to Surgeon-General Hamilton, dated November 1, says that there were five hundred and seventy-six deaths at Havana during the month of October, of these, eighty-six were from yellow fever, twelve of whom died in the Military Hospital, and the remainder (seventy-four) were private individuals or from merchant vessels. Dr. Burgess inspected the following named vessels bound to U. S. ports up to November 3: Span. bk. "Resuelta," for New Orleans, October 30—had one case of yellow fever on board while in port—was disinfected; Span. bg. "Victoria," for New Orleans, also had case of yellow fever on board while in port and was disinfected; Am. schr. "Christiana," for Key West, at a suspicious wharf; Am. str. "Hutchinson," for New Orleans, in open bay; Am. schr. "Sea Gull," for Key West, at a suspicious wharf; Am. str. "Santiago," for New York, in open bay; Am. str. "City of Washington," for New York, in open bay. Total number of deaths from yellow fever during the week, twenty.

Report on the Cholera in Egypt and Syria.—The U. S. Consul at Beirout, Syria, in a communication to the State Department, dated September 20, 1883, furnishes the following report relative to the cholera in Egypt and Syria:

On the twenty-fourth of last June a case of cholera occurred in Damietta, a city of the Delta, the hygienic conditions of which were exceptionally bad, even for an Oriental city. The disease spread rapidly throughout this town, and during the few weeks of its duration swept away about one fifteenth of the population. After the disease had prevailed for some time, a cordon was established around the city in which cholera had appeared. Notwithstanding this precaution, the disease spread to Cairo and the valley of the Nile above the capital.

While Alexandria was as yet free from cholera, a quarantine of ten days was established at Beirout against arrivals from Egypt. Arrivals were, however, permitted, and the Lazaretto, which has barely capacity for four hundred occupants, had at one time as many as fourteen hundred refugees. The Lazaretto of Beirout was established at a time when the city was small and enclosed within walls. It is a plateau projecting into the sea to the east of the old town and about a mile distant from it.

Being swept by the west wind, which blows from the old town, it was not especially liable to objection as a quarantine station against the plague, which was a disease rather contagious, and which could be measurably guarded against by household quarantine. But since the extension of Beirout, many houses have been built near it, and the abattoirs of the city are within a few hundred yards of it. It has therefore ceased to be a suitable station for a Lazaretto, being in effect a quarter of the city.

The arrangements of this Lazaretto are even worse than its situation. A few various buildings and a narrow camping ground are all the facilities for accommodating refugees.

The sanitary precautions were almost wholly neglected, and for a considerable time there was no resident physician. The different arrivals mingled with one another, with little attempt at isolation. I mean that passengers arriving at separate dates were able to mix with each other in the quarantine. As a specimen of the system adopted, there was a seller of iced drinks, who stood at the door of the Lazaretto, and sold his beverages to those inside and outside the walls. The cups were passed in, drained by the thirsty prisoners and then passed out again, to be used by the guards and outsiders, who thronged the outer rooms. On the third of August a soldier of the guard was taken with cholera, and at first sent in a public carriage to the military hospital in the town, but the doctor in charge declined to admit him. He was then taken to the hospital of the Sisters of Charity, where he was likewise refused admission. He was then taken back to the quarantine station, and died there. On the 5th of August, a girl, about a half a mile distant from the Lazaretto died of cholera. On the 7th of August, a woman in a remote quarter of the town was taken with cholera and died, and who it was said had washed the clothes of a man from the quarantine who did not have cholera.

Subsequently to these cases three deaths from cholera were reported by the quarantine officers. The last death occurred on the 14th of August. On the 10th of August an order from the Sublime Porte came for the establishment of a military cordon around Beirout. Against the cordon the American, British, German, Russian, Italian, and Spanish Consuls protested, telegraphing to their respective legations at Constantinople, as well as to the Governors-General of Syria and Lebanon, in identical messages, basing their protest on experiences during former epidemics, and the universal remonstrance of the medical men of Beirout, the municipal sanitary and foreign doctors, including American and French, that the cordon was useless, impossible, and dangerous. Previous to this time an order was issued for the discontinuance of the reception at Beirout of refugees from Egypt. In fact the cordon was inefficient, a number of persons passing through the cordon by paying a small fee. Such was the absurdity of the measure and its palpable deficiency, together with the actual suffering which it caused to the people by cutting off their supply of food and interrupting their business, while nevertheless the public health was exceptionally good, that after five days it was abandoned. On the 6th of September the last batch of refugees was discharged from the Lazaretto, and the city was declared free from cholera, and clean bills of health were given to vessels.

A review of this visitation opens up two inquiries: 1st. How did it happen that the first three deaths were persons not arriving from Egypt, and only one an inmate of the Lazaretto? 2d. Why did four deaths in the Lazaretto take place without any spread of the infection? Medical, as well as non-medical, men are divided in opinion on the question. Some believe that the disease, both within and without the Lazaretto, was not Asiatic cholera, but sporadic *cholera morbus*. It is popularly believed that one of the cases outside was one of poisoning by a jealous husband. Certainly it is unparalleled that a crowded, ill-nourished, and ill-housed body of refugees in the Lazaretto should be exposed to the infection and escape with so small a percentage of seizures.

Two explanations may be given on the basis that the disease was genuine cholera: 1st. That its character was so far modified by unknown causes that it has largely lost its infectious properties. 2d. That the bivouac without shelter of so large a number of inmates was unfavorable to the development of cholera germs. Certainly the present epidemic in Egypt lacks the virulence and universality of former epidemics.

It is also worth while to mention that soon after the outbreak of the cholera in Egypt, a considerable number of sailing vessels began to come to the port of Beirout, where they were quarantined for fifteen to twenty days. The place of anchorage designated by the quarantine officials for the said vessels was very close to the town. From these vessels, I am creditably informed, the sailors were in the habit of slipping ashore during Ramadan at night and returning to their vessels before daylight.

The month of Ramadan commenced on the sixth of July, and ended August the fourth, during which the Moslems in the East, do not eat or drink anything from daydreak until sunset, but dissipate by eating and drinking during the night, which usually brings on much sickness.

Thus it seems a miracle that the cholera did not spread in Beirout. It is right, however, to give credit to the local authorities, who took every possible measure to render the sanitary condition of the town as good as it can ever be, by cleaning the streets most thoroughly, spreading large quantities of lime and other disinfecting matter, and watering all the public places twice a day, to cool the hot temperature of the locality. These sanitary precautions were, in the opinion of many, the principal reasons that the cholera did not spread in Beirout, granting that the above-mentioned cases were genuine cholera. Further, I may mention that soon after the cholera appeared in Egypt, about one-half of the population of Beirout left the city and fled to Mount Lebanon, where the cholera has never spread during former epidemics, and where people feel perfectly safe from this dreadful disease.

REPORT OF SURGEON-GENERAL WALES. — In his annual report, Surgeon-General Wales, of the Navy, recommends that the medical departments of the great naval powers be invited to a conference, with a view to the adoption of a uniform nomenclature, classification, and tabulation of diseases, and of a system of interchange of periodical reports of the movement of disease from which international reports of sanitary conditions all over the world may be published at stated intervals.

The Surgeon-General advances the opinion that the present naval hospital system no longer fulfils the requirements of modern sanitary science. He recommends that the establishments at Chelsea, Brooklyn, and Philadelphia be sold, and that station hospitals be built at convenient points for the accommodation of acute cases only. It is intended that chronic cases, and those likely to be of long continuance, are to be sent to a general hospital at a central point.

The Dartmouth (N. H.) Medical College.—The largest class ever graduated from Dartmouth Medical College received their diplomas last Tuesday. The degree of M.D. was conferred upon forty graduates. A prize for the best examination in therapeutics was awarded to L. F. Wentworth, of Bridgewater, Mass.

Louis Thuillier.—The plate commemorative of the services and death of Louis Thuillier has been placed in the Normal School in Paris. It bears the following inscription, in letters of gold:

Louis Thuillier
Mort pour la Science.
Alexandrie, 1883.

The remains of Thuillier will soon be removed to Paris, the expenses of the removal being borne by the French Government. The Municipal Council of Paris has decided that the name of Louis Thuillier shall be given to one of the streets of the Latin quarter.

Medical Women for India.—A meeting was recently held in London for the purpose of considering the subject of medical women for India. Surgeon-General Hunter, M.D., F.R.C.P., presided. Mr. Kittredge, of Bombay, gave a detailed account of the efforts that had been made for the creation of a guarantee fund, by means of which competent female medical practitioners induced to visit India, might be assured a comfortable living. They had been enabled by the liberality of native gentlemen to secure already a guarantee fund amounting to between 40,000 and 50,000 rupees. Mr. Cama had given a donation of £12,000 for the erection of a hospital for women and children at Bombay. The Government had granted permission for women to dispense medicine; and, further, the authorities of the Calcutta University had conceded to females the right of training at the medical college and of qualifying for the degree of M.D. Apart from the great suffering which existed for want of medical women in India, this movement deserved support because of the impetus it would give to the moral and social improvement of native women.

Chicago Meat.—For years the character of meat sold in the markets of Chicago has not been above suspicion. Chicago canned beef has also been the subject of a well-founded distrust on the part of consumers. This suspicion and distrust arose from the fact that animals known to be suffering with disease, such as hog cholera, cancer and splenic fever in cows, and foot-rot in sheep, were shipped to the stock-yards in this city, and slaughtered either by unscrupulous local dealers or by packers. There was great profit in the practice. This rascally trade is to be broken up. For some time the health department have had one inspector located at the stock-yards. Since September 1st, he has condemned and sent to rendering establishments, eighty-five head of cattle. At the present time, two inspectors are located there, and their inspection is severe. This inspection will undoubtedly be maintained, and there need be no further fear of the quality of meat offered for sale in Chicago. In connection with the inspection of cattle, it may be said that this inspection benefits other cities as well as Chicago. Inspector Lamb notified the Chicago health commissioners last month that three car-loads of cattle, containing twenty head affected with cancer, had been sent to a firm in Grand Rapids, Michigan. Notice of their approach was immediately sent to the health authorities there. It might be said, in passing, that Grand Rapids is not a good place in which to dispose of diseased meat, the health authorities being uncommonly watchful and successful in the prosecution of guilty parties.

In connection with the above, it is worthy of notice that the Commissioner of Agriculture, Mr. George B. Loring, has issued a very important circular, in which he has called, at Chicago, on November 15th and 16th, a conference of representatives of all bodies interested in the animal industries of the United States. At this convention it is proposed to discuss the subject of contagious diseases among our domestic animals, under the following heads: (1) The extent to which they prevail in this country; (2) the methods of their introduction and spread; (3) the methods by which they may be eradicated or isolated; (4) the efficiency of existing legislation.—*Sanitary News*, November 1, 1883.

Tin in "Tinned" Foods.—Tinned meats, soups, vegetables, and more especially fruits, are all, without exception, contaminated by metals; such is the irresistible conclusion of recent scientific investigation. In 1878, Mr. Albert E. Menke communicated to the *Chemical News* results of analyses of a tin of lobster, one of apples, and another of pineapple; the latter contained tin dissolved in the juice equal to 1.3 grain per pound, the lobster and apples a much smaller quantity. Mr. Hehner, in 1880, communicated to the *Analyst* the results of a prolonged and thorough investigation of the subject. He found tin in tinned French asparagus, American asparagus, peas, tomatoes, peaches, pineapples, white cherries, red cherries, marmalade, corned beef (five different brands), ox-cheek, ox-tongue (three kinds), collared head, tripe, oysters, sardines preserved in oil, salmon, lobsters, shrimps, curried fowl (two kinds), boiled rabbit, boiled mutton, roast chicken, roast turkey, soup, and in three brands of condensed milk. The amount of tin found does not appear large—*e. g.*, in the milk one-tenth of a grain per pound, in one of the soups half a grain per pound, and in a pound tin of preserved oysters seven-tenths of a grain per pound. On a later research, Mr. Wynter Blyth has found far larger quantities. In a recent report to the Vestry of St. Marylebone, detailing the examination of twenty-three samples of tinned apricots, tomatoes, pineapples, and cranberries, the amounts found calculated as stannous hydrate range from 1.9 grain to 14.3 grains per pound, the mean amount being 5.2 grains. The juice and fruit in some instances had a metallic taste. Several of the tins showed signs of corrosion.

The older school of toxicologists, as represented by Orfila, considered pure tin vessels innocuous; if accidents occurred, they were ascribed with confidence to the admixture of lead in the alloy, or to arsenic. The arsenic theory ceased to be held when it was found that arsenic was present in so small a quantity that an adult would have to spend more than forty years drinking and eating from tin vessels before he imbibed a poisonous dose; and even the explanation of lead so often accompanying the tin has not of late been considered sufficient, but the question is of some moment whether tin in itself, present in a soluble form contaminating food, may not act injuriously. All know the toxic action of the chloride of tin on the one hand, and the inactivity of stannic oxide on the other: it is evident that in tinned foods we have to do with neither, but with some form of stannous hydrate. The little that is known of the action of stannous hydrate may be summed up in a few lines. Doses of about .174 gramme per kilogramme of body weight cause in guinea-pigs death with signs of intestinal irritation; but with doses smaller than .17 to .2 gramme the effects are uncertain, and the animals generally recover. Hence, supposing man to be affected in the same proportion, he would have to take from three to four drachms, or consume at a meal ten pounds of the most contaminated of Mr. Wynter Blyth's tinned fruits.

But it is not a question of immediate lethality, it is rather one for inquiry as to the action of small repeated doses continued for a long time. In the summer season, some families who go yachting, fishing, or travelling in remote parts often carry a considerable supply of "tinned" provisions, and must take, in the aggregate, physiologically active doses of stannous hydrate, possibly producing some slight dyspepsia or intestinal irritation. From time to time, indeed, serious symptoms are witnessed after eating tinned meats; but the exact cause of such illness has never been in any thorough way investigated. It must also be remembered that certain sugars now in the market contain tin in the proportion of about half a grain to the pound—no very great quantity in itself, but the small fractions of the metal found in this and that article of food in daily use may mount up until an active dose is taken. Physicians and medical men generally will do well to inquire closely into the diet of their patients suffering from obscure gastric affections; and it is hoped that, in the mean time, experiments may be made by competent men on the action of stannous hydrates.—*Med. Times and Gazette*, October 27, 1883.

Tracheocele.—M. Détis reports a case of tracheocele affecting a man æt. twenty-nine years, who, with the exception of an attack of rheumatism, had been in previous good health. After a severe attack of coughing, during an attack of bronchitis, he suddenly noticed a small tumor, about the size of a hazelnut, just above the sternum. Within three days' time it increased to the size of a pigeon's egg, and interfered with respiration and deglutition. It then remained stationary for three weeks, when it burst suddenly, discharging pus and blood, and then became reduced in size. After that it grew again slowly for a time, but was smaller and softer than before. It alternately grew larger and diminished with expiration and inspiration. Détis treated it by compression by a kind of truss, and after six weeks it was cured; but the patient became subject to chronic asthma, which required constantly increasing doses of morphia for its relief.

The reporter has been able to find records of twelve other cases, and from these and his own he draws the following conclusions: 1. Tracheocele may be caused by bodily exertion of any kind. 2. Its principal symptoms are enlargement, or expansion, during expiration, diappearance under compression, and an indistinct, muffled, and squeaky voice. 3. The prognosis is favorable. 4. The treatment is purely local, and consists in constant compression.—*Centralbl. f. Chirurgie*, July 7, 1883.

Health in Michigan.—Reports to the State Board of Health, for the week ending November 3, 1883, indicate that inflammation of the bowels has considerably increased, and that measles, intermittent fever, and remittent fever have decreased in area of prevalence.

Compared with the average for the month of October in the preceding six years typho-malarial fever, remittent fever, and diphtheria were considerably less prevalent, and consumption, intermittent fever, diarrhœa, and whooping-cough were less prevalent in October, 1883.

Including reports by regular observers and others, diphtheria was reported present during the week ending November 3, and since, at twenty places; and scarlet fever at twenty-five places.

Obituary Record.—Dr. E. H. Trudel, President of the Montreal School of Medicine and Surgery, and Professor of Obstetrics, died on the 5th inst., aged 63. He had practised in Montreal since 1844, and for many years had been one of the most prominent physicians of the Province.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM NOVEMBER 5 TO NOVEMBER 12, 1883.

Bache, Dallas, *Major and Surgeon.*—Par. 1, S. O. 238, A. G.O., October 18, 1883, assigning him to duty at Willet's Point, New York, revoked.—*Par. 2, S. O. 252, A. G. O.*, November 3, 1883.

Sternberg, George M., *Major and Surgeon.*—Leave of absence granted October 4, 1883, extended one month.—*Par. 4, S.O. 255, A. G. O.*, November 7, 1883.

Vickery, R. S., *Major and Surgeon.*—Assigned to duty at Fort Townsend, W. T.—*Par. 3, S. O. 149, Department of the Columbia*, October 29, 1883.

Wolverton, William D., *Major and Surgeon.*—Granted leave of absence for one month.—*Par. 6, S. O. 201, Department of the East*, October 24, 1883.

Merrill, J. C., *Captain and Assistant Surgeon.*—Granted leave of absence for one month.—*Par. 7, S. O. 201, Department of the East*, October 24, 1883.

Patzki, J. H., *Captain and Assistant Surgeon.*—Granted leave of absence for three months, on Surgeon's certificate of disability.—*Par. 6, S. O. 254, A. G. O.*, November 6, 1883.

Owen, W. O., *First Lieutenant and Assistant Surgeon.*—Relieved from duty at Vancouver Barracks, W. T., and assigned to duty at Fort Stevens, Oregon.—*Par. 2, S. O. 148, Department of the Columbia*, October 26, 1883.

Wilson, George F., *First Lieutenant and Assistant Surgeon.*—Assigned to temporary duty at Fort Townsend, W. T.—*Par. 2, S. O. 149, Department of Columbia*, October 29, 1883.

OFFICIAL.

WAR DEPARTMENT, SURGEON-GENERAL'S OFFICE,
WASHINGTON, D. C., October 24, 1883.

Surgeon-General Charles Henry Crane.

With profound sorrow, the death of Brigadier-General Charles Henry Crane, Surgeon-General, U. S. A., which occurred at his residence in Washington, D. C., October 10, 1883, is announced to the officers of the Medical Department of the Army.

General Crane, son of the late Colonel I. B. Crane, 1st. U. S. Artillery, was born at Newport, R. I., July 19, 1825, and received his early education at Maple Grove Academy, Middletown, Conn. He entered Yale College in 1840, graduating in 1844, with the degree of Bachelor of Arts. The degree of Master of Arts was conferred upon him by the same Institution in 1847.

He graduated in medicine at the Medical Department of Harvard University in August, 1847.

Having been approved by an Army Medical Examining Board, December 11, 1847, as a candidate for the position of Assistant Surgeon, U. S. Army, he was immediately placed under contract as an Acting Assistant Surgeon, and accompanied a detachment of troops to Mexico, arriving at "Camp Washington," near Vera Cruz, February 20, 1848. He was commissioned Assistant Surgeon, U. S. Army, February 14, 1848. From February 20, to July, 1848, he served with the "Army of Invasion" in Mexico.

On returning from Mexico, early in August, 1848, he reported for duty at Fort Columbus, New York Harbor, and was assigned to duty with the 2d U. S. Artillery. October 8, 1848, he accompanied two companies of the 2d U. S. Artillery to Fort Monroe, Va. He was then ordered to Florida with troops, arriving at Fort Pickens, Pensacola, Fla., November 16, 1848. From this date until August 10, 1851, he served at Key West Barracks, St. Joseph's Island, Forts Pickens, Brooke, Fraser, Casey, and Myers, and with expeditionary forces in the field. On being relieved from duty in Florida, and at the termination of a leave of absence, he reported for duty December 18, 1851, and on January 13, 1852, sailed from New York in the steamer "Falcon," with recruits for California. He arrived at Benicia, Cal., February 28, 1852, and was assigned to temporary duty at Benicia Barracks. From June 16, until September 1, 1852, he was engaged in field service against hostile Indians near Merced River, Cal. From September 23, until November 10, 1852, he was again in the field with an expedition in the Sacramento Valley, Cal. November 10, 1852, he arrived at Fort Jones, Cal., where he remained on duty until July 15, 1853.

From October 31, 1853, until March, 1856, he was on duty at Fort Lane, Oregon. During these years he was actively engaged in Post duty and with military expeditions against Indians, prominent among which was that against the Rogue River Indians in 1856, where he rendered distinguished service.

On August 7, 1856, he was ordered to Fort Yamhill, Oregon, where he served until relieved from duty on the Pacific Coast in December, 1856.

Reporting for duty in New York, he served for a short time with the Medical Purveyor, U. S. Army. From May 1, 1857, until September 20, 1859, he was one of the members of an Army Medical Examining Board convened to meet in New York City. Being relieved from this duty, he remained in New York, acting at times as Medical Purveyor.

September 20, 1859, General Crane accompanied Lieutenant-General Scott to San Juan Island, on his diplomatic visit, returning to New York December 12, 1859, and continuing on duty as Attending Surgeon at Headquarters of the Army, and on special duty until February 28, 1862.

He was promoted Major and Surgeon May 21, 1861.

On February 28, 1862, he was assigned to duty as Medical Director, Department of Key West, Fla. On June 30, 1862, he was transferred to Hilton Head, S. C., and assigned to duty as Medical Director, Department of the South. July 31 to August, 1863, he is reported as awaiting orders at Washington, D. C., and on duty connected with Prisoners of War.

September, 1863, he was placed on duty in the Surgeon-General's Office, Washington, D. C. July 28, 1866, he was appointed Assistant Surgeon-General, U.S. Army, with the rank of Colonel, and upon the retirement of General Barnes, was appointed Surgeon-General, July 3, 1882.

March 13, 1865, General Crane received the brevets of Lieutenant Colonel, Colonel, and Brigadier-General, for faithful and meritorious services during the War of the Rebellion.

In the death of Surgeon-General Crane the Medical Department of the Army sustains a serious loss. Still in the vigor of life, and with a resonable prospect of several years of active service in the position to which he had been but recently promoted, it has pleased an inscrutable wisdom to remove him from our midst.

His record, honorable and spotless, lives after him; a source of pride and satisfaction to his friends, a model worthy of imitation by all.

The larger portion of his official life was engaged in administrative duty, for which he had always manifested a peculiar fitness.

Selected to assist in the arduous and important duties devolving upon this Office during the latter years of the War of the Rebellion, his sound judgment, delicate sense of justice and right, deliberate action, and firm decision, soon won for him an enviable reputation, and materially assisted in raising the Medical Corps of the Army to the high degree of discipline and efficiency which has characterized it in the past and present.

In the literary and scientific work of the office he manifested untiring interest; to his watchful care, encouragement and aid, are largely due the successful progress and completion of undertakings which have gained for the Medical Corps the admiring recognition of the world.

Thoroughly acquainted by early experience with the requirements of his Department, assiduously attentive to the routine of business, even in its details, punctilious in regard to the rights of all, and earnest in his endeavors to promote harmony and a healthy *esprit du corps*, General Crane labored patiently, faithfully, and effectively for the best interest of his charge.

In his private life he was conspicuous for his firm, devoted friendships; for his kindly interest in, and sympathy with, the joys and griefs of those about him; for his habitual attention to the courtesies which adorn life. Unselfish and generous to a fault, his many deeds of kindness and charity were done quietly and without ostentation.

He needs no higher tribute to his worth as a man than the widespread sorrow which his loss has occasioned, and the respect for his memory which will long be cherished by all who knew him.

General Crane, at the time of his death, was one of the Commissioners of the Soldier's Home, a Visitor to the Government Hospital for the Insane, and to the Columbia Hospital for Women.

After appropriate funeral services at his late residence in this city on October 11, 1883, his remains were removed to Shelter Island, N. Y., for interment.

D. L. Huntington,
Acting Surgeon-General, U. S. Army.

NOTES AND QUERIES.

COLLEGE DIPLOMAS.

To the Editor of The Medical News.

Sir: I would like a brief space in your journal to state a few facts in reply to an article (The Medical News, Sept. 22, 1883) referring to one of the graduates of the Medico-Chirurgical College, thereby reflecting on said College. Rev. R. V. Danne, on applying for the senior course, presented two authenticated certificates from the University of Melbourne, Australia, testifying to his having attended two full courses in medicine at that institution, also a certificate to that effect from Mr Spencer, American Consul in Australia. Under no other circumstances could he or any one be admitted to the senior class in the Medico-Chirurgical College, which maintains a three years' course. Mr. Danne passed a satisfactory examination and received his diploma. If the faculty were deceived, it was in the face of apparently most "conclusive evidence." As the article further states, our standard *is* high, and it is our intention to adhere to our announced principles, and in every detail to labor for the elevation of the medical profession.

Very respectfully,
Wm. S. Stewart, M. D.,
Dean.

Medico-Chirurgical College, Philadelphia,
Nov. 14, 1883.

The Medical News *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the News *should be addressed to No. 1004 Walnut Street, Philadelphia.*

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

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ORIGINAL ARTICLES.

A CONDENSED TABULAR REPORT OF 178 CASES OF HEMORRHAGIC MALARIAL FEVER,

WITH SPECIAL REFERENCE TO THE INFLUENCE OF QUININE IN THE TREATMENT OF THE DISEASE.

BY E. D. McDANIEL, A.M., M.D., LL.D.
OF CAMDEN, ALA.
EX-PRESIDENT OF THE ALABAMA STATE MEDICAL ASSOCIATION, ETC.

IN the issue of THE MEDICAL NEWS of 21st July last, I presented a "Tabular Report of 24 Cases of Hemorrhagic Malarial Fever" that had come under my observation. The analysis of these cases led me to the following conclusions:

1st. That the black race is less susceptible of the disease than the white man is, but is not *exempt*.

2d. That the susceptibility of the sexes is about equal—the greater number of cases occurring among males being due to greater exposure.

3d. That no particular age is protected, inherently.

4th. That quinine is not only not the only effective and reliable remedy as is now widely taught, believed, and practised, but that it is, on the contrary, an uncertain, and even a dangerous agent in this disease, and often seems to determine an unfavorable result.

Of these conclusions, the 1st, the 2d, and the 3d have not been contested, and I therefore regard them as accepted and dismiss them from consideration. But the 4th, which is incomparably the most important to the medical profession, to patients, to society, to the human race, is controverted. I expected this, indeed, it was one of the purposes of my report to call general attention to this important point, to challenge the routine and dangerous employment of the cinchona salts, now so extensively adopted in the treatment of hemorrhagic malarial fever, and to induce many physicians to devote more close attention to the subject, to make careful observations and minute reports of the different modes of treating the disease and of the results. That this purpose now promises to be accomplished, is indicated by a report of 33 cases made in the issue of THE MEDICAL NEWS for August 1st, by my eminent friend Dr. R. D. Webb, of Livingston, Ala., and by reports since sent me by some of the most accomplished and successful practitioners of Alabama, embracing men of opposite views and of diverse practice as regards the matter in dispute.

The question of the benefit or hurt done by quinine, in any of the doses or modes of administration now employed in hemorrhagic malarial fever, as indicated by its influence on the rates of recovery or of death, these rates being compared with the rates of recovery or of death in the same disease, under other modes of treatment, with like environments, adjuvants, or accessories, is, therefore, now singly and fairly before us; and the coöperative investigations, observations, and reports now being made promise a satisfactory answer. There is no doubt that the fever under consideration, like other diseases, varies at different times and places, by being more pernicious or less pernicious, and that the physicians who treat it, like other physicians, vary, by being some more judicious, and others less judicious, in applying any mode of treatment. The reports of the same men, or of different men with the same views, or with different views, may also be expected to vary reasonably, according to time, place, and circumstances. But large aggregates will not fail to give fair averages, and a correct analysis of accumulated and various reports may safely be trusted to reveal the true influence of quinine on the death-rate in hemorrhagic malarial fever. Indeed, the greater the variety and diversity of circumstances and contingencies, and the more numerous the perturbing and modifying influences under which facts are observed, the more authoritative will be the generalization derived therefrom; and if the general voice of observations made by various styles of reliable men, and under the widest reasonable range of surroundings, complications, coincidences, and antagonisms, proclaims, in loud, clear, unmistakable tone, the law, that quinine in hemorrhagic malarial fever is "a savor of life unto life," or, contrariwise, that it is "a savior of death unto death," how supreme and authoritative must that law be to be thus plainly thundered forth from the midst of sources of so much apparent uncertainty and confusion? The voice of Nature is the voice of God.

The object of this paper is simply to *reach* and *establish facts*. It is not intended to ascertain or to explain how quinine hurts, or how it benefits, in the fever now under consideration, but merely whether it hurts or benefits. This is the practical matter before us. The *mode of action* of quinine is altogether a different thing, and will be in order only after the *action itself* shall have been definitely ascertained.

Having said what seemed to me necessary for the clear understanding of what is to follow, I now present a table of 178 cases of hemorrhagic malarial fever, made up of

25 cases seen by myself, 24 of which were before reported.
33 reported by Dr. Webb, of Livingston, Ala.
22 reported by Dr. Saml. Perry, of Marion, Ala.
46 reported by Dr. Jackson, of Summerfield.
11 reported by Dr. Webb, of Greene Co., Ala.
41 reported by Dr. Minor, of Greene Co., Ala.

Of the six reporters, Drs. R. D. Webb, Samuel Perry, and H. Y. Webb are understood to be of those who regard quinine in the disease with favor, while Drs. P. B. Minor, R. D. Jackson, and myself are of one mind in opposition to quinine.

Synopsis of 178 Cases of Hemorrhagic Malarial Fever, showing the Influence of Quinine on the Death-rate.

Reporter.	No. of Cases.	Recovered.	Died.	Quinine Taken.	Quinine not Taken.	Recovered with quinine.	Recovered without quinine.	Died with quinine.	Died without quinine.
Dr. P. B. Minor,	41	32	9	8	33	2	30	6	3
Dr. H. Y. Webb,	11	6	5	10	1	6	0	4	1
Dr. R. D. Jackson,	46	38	8	2	44	0	38	2	6
Dr. Saml. Perry,	22	13	9	20	2	11	2	9	0
Dr. E. D. McDaniel,	18 7	13 1	5 6	12 7	6 0	7 1	6 0	5 6	0 0
Dr. R. D. Webb,	24 9	21 2	3 7	23 3	1 6	21 2	0 0	2 1	1 6
Total,	178	126	52	85	93	50	76	35	17

Of these 178 cases:
- 126, or 71 per cent., recovered;
- 52, or 29 per cent., died;
- 85, or 48 per cent., took quinine;
- 93, or 52 per cent., did not take quinine.

Of the 85 cases with quinine:
- 50, or 59 per cent., recovered;
- 35, or 41 per cent., died.

Of the 93 cases without quinine:
- 76, or 82 per cent., recovered;
- 16, or 18 per cent., died.

Thus the death-rate in the cases with quinine is 23 per cent. heavier than in those without quinine, an excess greater than the entire death-rate in the cases without quinine. Taking these rates as a basis, if the whole 178 cases had been treated with quinine, there would have been lost 21 lives more than actually were lost under the divided treatment, and 41 more than would have been lost had all been treated without quinine. And on the same basis, if the whole 178 cases had been treated without quinine, there would have been saved 20 lives more than were saved under the divided treatment, and 41 more than would have been saved if quinine had been used in all.

A STATEMENT OF 41 CASES OF HEMORRHAGIC MALARIAL FEVER,

OCCURRING BETWEEN THE YEARS 1865 AND 1883, INCLUSIVE.

BY P. B. MINOR, M.D.,

OF FORKLAND, ALA.

THE accompanying tabulated statement is offered only as a record of facts, and from which the profession can draw its own inferences. The author has so frequently seen the hemorrhage from the kidneys reproduced by the administration of quinine, and all the bad symptoms aggravated thereby, that he has long since abandoned its use *in toto* in this disease. It is hard for the practitioner of the South to look upon any disease of malarial origin and not fly to the old stand-by—quinine—for its relief; but this is undoubtedly a disease in which (in the words of Dr. E. D. McDaniel, of Ala.) "quinine is at best a very uncertain and dangerous remedy, except in very discreet hands."

"By its fruits shall the tree be known." Let those of the profession who have had a large experience with this disease come forward and state the results, with and without the quinine treatment.

		Color.		Sex.		Result.		Quinine.		Attack.			Recovered.		Died.	
Case.	Approximate Age.	White.	Black.	Male.	Female.	Recovered.	Died.	Taken.	Not taken.	Primary.	Secondary.	Relapsed.	With quinine.	Without quinine.	With quinine.	Without quinine.
1	6	1			1		1	1		1					1	
2	15	1		1		1			1	1				1		
3	8	1		1			1	1		1					1	
4	6	1			1		1		1	1						1
5	58	1		1		1			1	1				1		
6	18	1		1		1			1	1				1		
7	8	1			1		1		1	1						1
8	18	1			1	1			1	1		1		1		
9	21	1		1		1			1	1				1		
10	25	1		1			1		1		1					1
11	28	1		1		1			1		1			1		
12	17	1			1	1			1	1				1		
13	24	1			1	1			1	1				1		
14	25	1			1	1			1					1		
15	26	1		1		1			1	1				1		
16	27	1		1		1			1		1	1		1		
17	23	1			1	1			1	1				1		
18	12	1		1		1			1	1				1		
19	25	1		1		1			1		1			1		
20	18	1			1	1			1	1				1		
21	14	1			1	1			1	1				1		
22	30	1			1	1			1					1		
23	29	1			1		1	1		1					1	
24	32	1		1		1			1		1			1		
25	17	1		1		1			1	1				1		
26	15	1			1	1			1	1				1	1	
27	50	1		1			1	1								
28	34	1		1		1			1	1				1		
29	8	1			1	1			1	1				1		
30	17	1		1		1			1		1	1		1		
31	40	1		1		1			1		1			1		
32	14	1		1		1			1	1				1		
33	28		1	1		1			1	1				1		
34	32	1			1	1			1	1				1		
35	30		1		1	1			1	1				1		
36	36		1	1		1			1	1				1		
37	7	1			1	1			1	1				1		
38	50	1		1			1	1		1					1	
39	28	1		1			1	1		1					1	
40	25	1		1		1		1		1			1			
41	42	1		1		1		1		1			1			
41		38	3	24	17	32	9	8	33	31	7	3	2	30	6	3

HISTORICAL NOTES ON SYPHILIS.

BY R. L. MACDONNELL, M.D.,

OF MONTREAL, CANADA.

IT is generally thought that syphilis made its appearance in Europe in 1494. Guaiacum and mercury were soon employed for its cure. The former was first recommended as a specific by Glanfield at the beginning of the sixteenth century. The Chevalier Ulric de Hutton, a German poet and man of letters, spoke of it in high terms in his essay on the Lues Venerea, the earliest printed work upon the subject, published in 1533.

Sir Ulric was a contemporary and opponent of Erasmus, and an enthusiastic Lutheran. He may fairly be said to have written from experience, for he died of the disease. Jerome Frascator devoted the greater part of the third volume of his poem[1] on syphilis to the praises of *lignum sanctum*, now called guaiac. This extraordinary work saw the light in 1530 at Verona; it is remarkable for the chaste and classical elegance of its language, worthy of the best days of Imperial Rome.

Guaiacum was prescribed by the best, and, more than that, the most fashionable physicians of the day, such as Nicolas Massa, who was also a famous anatomist, and Musa Brassavola,[2] who was decorated with the title of archiater by four popes, and with that of consulting physician by Charles V., Francis I., and Henry VIII. of England. This eminent practitioner thought highly also of the use of sarsaparilla and china root in syphilis and was the author of a book upon these subjects.[3]

The fashion changed and mercury was soon found a much more efficacious remedy. Berenger de Carpi, the anatomist, was the first to recognize its value, and by him it was used in the form of an ointment. This very successful mode of treating the disease was kept secret by Carpi, who by this practice amassed a large fortune, and contrived at his death to leave enormous legacies to his friends. When graciously invited to practise at the court of Spain, he returned an insolent answer to the king, and one of the popes he treated in the same contemptuous manner.

Berenger, or Berengarius, as according to the fashion of the time, he was called, was reported to have dissected one hundred human bodies, and to have been the discoverer of the vermiform appendix. Against him, at one time, was brought the charge of having vivisected two Spanish criminals for the purpose of examining the peristaltic actions of their intestines, and Eloy quaintly tells us that he selected Spaniards "plutot que d'autres parcequ' il haïssoit leur nation." The anatomists of that day, notably Vesalius, were often accused of human vivisection.

Mercurial ointments had been in use before Berenger's day, but not for syphilis. Old Guy de Chauliac, who wrote early in the fourteenth century, described an ointment in which one-tenth per cent. of mercury was present. Inunction was thus practised for many years before the internal administration of mercury was thought safe. Fumigation, too, was much in vogue. The credit of introducing this plan of treatment is due to the poet Frascator, though Aloysius Lobera, a Spaniard, who was physician to the Emperor Charles V., was the first to strongly advocate its use, and to give precise directions as to the best method of carrying it out. He regarded mercurial fumigation as an admirable procedure in all inveterate cases of syphilis, in persons of a robust habit of body; but prohibited it altogether in cases of weak or hectic patients, or such as were subject to cough, asthma, or dropsy.

It appears to have been the custom to prescribe for syphilitic patients, in addition to inunction, a prolonged diaphoresis and a very low diet. On the continent the patient was placed in a cave, oven, or dungeon, and Wiseman says that it was the custom in England to use a tub for this purpose. Extraordinary abstinence was enjoined during the continuance of the inunction. Hence the expression *tub-fast* used by Shakspere. Timon (Act IV. Sc. iii.) says to Timandra

> "Season the slaves
> For tubs and baths; bring down rose-cheeked youth
> To the tub-fast and the diet."

In the foot-note to this passage in Johnson & Steven's edition of the poet's works the following quotations from old plays are given

> "—you had better match a ruin'd bawd
> One ten times cur'd by sweating and the tub."
> Jaspar Maines, 1639.

Again, in the *Family of Love* (1608), a doctor says:

> "O for one of the hoops of my Cornelius' tub, I shall burst myself with laughing else."

In *Monsieur d' Olive* (1606)

> "Our embassage is into France, there may be employment for thee: Hast thou a tub."

Paracelsus, shameless charlatan though he was, was the first to teach the profession that mercury could be given by the mouth. Not only for mercury, but for a number of our most valuable remedies, to wit, antimony, sulphur, nitre, laudanum, and iron, are we indebted to this mighty impostor Philippus Aurelius Theophrastus Bombastes Paracelsus ab Hohenheim.

The prevailing belief in the humoral theory of disease, hampered for centuries the usefulness of this most useful remedy. Salivation and salvation meant the same thing in those days. Disastrous results were soon observed. As early as 1550, or earlier, there were cases recorded, notably by Massa,[1] of metallic mercury being found in the bones of persons who had died of syphilitic disease.

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[1] It was dedicated to Cardinal Bembo: "Ce fut à lui qu'il dedia son Poëme intitulé. Syphilis, c'est a dire, du mal vénérien; & Bembo, apres l'avoir lu, entrouva la versification si riche & si belle, qu'il envoya á Sannozar, celebré Poëte Latin et Italien. Cetui cé fut'equ!ement satisfait de la lecture de cet onvrage, il avona mëme au Cardinal Hyppolite de Médicis et à Jean Baptiste de Mantone dit le Mantuan, qu'il estimoit plus ce poëme que celui qu'il avoit compose "de Partu Virginis" et auquel il avoit travaillé pendant vingt an. En effet la piece entitutée Syphilis est un onvrage daus le qout des georgiques de Virgil, dont la versification est riche et nombreuse, les images vives et les pensées noble."
Eloy—Dictionnaire Historique de la Medicine.

[2] There were two Brassavolas, eminent physicians in the sixteenth century. The other, whose Christian name was Jerome, was in high practice at Rome. He published a treatise on the nourishment of the body by means of enemata. The opinions expressed he confirmed by actual experiment. It was also proved by him that certain drugs could be administered in this manner, particularly cinchona in fevers.—Eloy, 1778.

[3] De Radicibus Chinæ usu Tractatus cum quæstionibus de Ligno Sancto. Venetiis, 1566.

[1] "Non semel in sepulchris argentum vivum in mortuorum capitibus inveni."

Treatment based upon this theory was first opposed by Pechlin in 1696, and later by Checoyneau, of Montpelier. Milder measures were the result of their teaching; but a great change took place after Van Swieten introduced into the Austrian army the use of his famous solution of corrosive sublimate. Gradually, up to the present day, the treatment of syphilis has become less heroic and more effectual.

The first treatise written in English on the subject is that of Clowes, "A Brief and Necessary Treatise Touching the Cure of the Disease now usually called the Lues Venerea." This work was first printed in 1585. Clowes was a surgeon of St. Bartholomew's and of Christ's Hospital. He had himself cured at the former institution alone upwards of a thousand patients, or above two hundred annually, in the course of five years. He used mercurial frictions and the occasional exhibition of turpeth mineral (a sulphate of mercury), or mercurius diaphoreticus, of which he speaks in terms of high commendation. Clowes was also the author of an important treatise on "burnings made with gunpowder, and wounds made with gunshot, halberd, pike, lance, etc." This latter work must have had a ready sale, for it was published in 1588, the Spanish Armada year.

Clowes' military experiences were gained in the low countries, whither he had been sent by good Queen Bess to help the wounded of the army of the Earl of Leicester.

Those were the days when syphilis was indeed syphilis;[1] and the possession of a nose was a warranty of a high moral character. The noseless became an important element in the community. Later on, in 1761, was published an essay entitled "A Plan for the Extirpation of the Venereal Disease." The author proposed that all the inhabitants of the world should simultaneously be mercurialized. To defray the cost of this large undertaking, a tax of one guinea on noses was to be levied; for, he says, "I hope that there are at least a fourth of the inhabitants of the island that have this ornamental feature actually remaining."

The business of repairing damages to these facial appendages was a trade in itself. Families took it up together, and the art descended from father to son. There lived in Sicily, in 1442, a family by the name of Branca, who were specially gifted in this somewhat unusual method of gaining a livelihood. They used skin-flaps from the arm. At the commencement of the sixteenth century a family named Vianco, in Calabria, followed the same profession.

Tagliacozzi, in 1597, Professor of Surgery in the University of Bologna, was the first to describe accurately and to practise publicly the operation since known by his name. Although he had many imitators, the practice fell into disrepute, and many began to doubt that it had ever been performed; latterly it has been revived, and successful cases have been recorded. The operation of rhinoplasty by the translation of a flap from the forehead originated in India amongst the native operators, and was brought before the notice of European surgeons in 1794.

In the seventeenth century, syphilis was a common cause of death. In the mortality returns of London, lues venerea is put down as the cause of 97 deaths in 1675; of 114 deaths in 1680; and of 104 deaths in 1694. Read Sydenham and Astruc, if you would like to know what the malady of France was in those days.

Many of the most noted characters in history were victims to its onslaughts. The enemies of Cardinal Wolsey, in 1539, accused him publicly of being diseased, and of "knowing himself to have the foul contagious disease, etc., he came daily to your highness (Henry VIII.), rowning in your ear, and blowing upon your most noble grace with his perilous and infectious breath."

Syphilis, by its common name, occurs frequently in Shakspere. Poor Dame Quickly ended her days in "'the spital,'' probably Bartholomew's, the nearest to Eastcheap, of malady of France. And the bard shows a remarkably familiar knowledge even of the secondary and tertiary symptoms, many of which are named in this following passage from Timon of Athens (Act IV. Scene III.):

> "Consumptions sow
> In *hollow bones of man:* strike their *sharp shins*,
> And mar men's spurring. Crack *the lawyer's voice*,
> That he may never more false title plead,
> Nor sound his quillets shrilly: *hoare* the flamen
> That scolds against the quality of flesh,
> And not believes himself: *down with the nose*,
> *Down with it flat; take the bridge quite away*
> Of him, that his particular to foresee,
> Smells from the general weal: make *curl'd pate ruffians*
>   *bald*;[1]
> And let the unscarr'd braggarts of the war
> Derive some pain from you: Plague all;
> That your activity may defeat and quell
> The source of all erection."

MEDICAL PROGRESS.

Action of Corrosive Sublimate on the Bacteria of Diphtheria.—Dr. Kaulich, following out the results of Koch's studies as to the action of corrosive sublimate on bacteria, administers this substance internally and applies it externally. As a topical application he uses the following: Corrosive sublimate 1 part, water 1000 parts. In children upon whom tracheotomy has been performed, the trachea is washed out with the same solution, while inhalations of corrosive sublimate gr. $\frac{1}{20}$, water f℥ xxx. Kaulich also prescribes, for children, gr. ⅙–⅓ of sublimate in gum water, slightly alcoholized. He also uses as a spray for inhalation concentrated lactic acid, grs. jss–ij, distilled water fʒj. This is used every three or four hours. For the swelling of the ganglia of the neck he uses the following as a liniment: Spirits of turpentine and chloroform āā fʒss, oil fʒiij.—*Journal de Méd. de Paris*, Oct. 27, 1883.

Lingual Cysts.—In his *Thèse* on this subject, M. Géhe makes four divisions or varieties of lingual cysts—serous, mucous, hydatid, and dermoid.

Pathology.—Serous cysts are generally situated on the under surface and at the base of the tongue. They contain clear, transparent fluid, and are lined on their inner surface with pavement epithelium. The mucous cysts are situated wherever the mucous glands are found

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[1] The loss of hair in syphilis was not observed until 1536.

—at the tip and sides of the tongue and between the tonsils. They contain a ropy fluid, in which may be found cholesterin crystals. Hydatid cysts—cysticerci, echinococci, etc.—may develop at any part of the tongue. The dermoid cysts, which are seldom found, are situated in the middle line of the organ.

Etiology.—As regards dermoid cysts, Géhe accepts the theory which explains their formation by a pushing forward of the blastoderm through the bronchial fissure. Serous cysts take their origin from erectile vascular tumors, or from the so-called Bochdalek's glands, in the same manner as retention cysts. Mucous cysts are of inflammatory origin, and are caused by inflammation of the mucous crypts and partial obliteration of the gland ducts.

Symptoms.—The symptoms depend very much on the situation and structure of the cysts. Severe symptoms may sometimes arise from inflammation of the sac alone. Only hydatid cysts grow to any considerable size; the others generally remain small, and interfere only with speech and mastication. The course of these cysts is always chronic.

The diagnosis is not difficult, since the cysts can be readily examined. The treatment is the same for all cysts of the tongue, and consists in transfixing by a silk thread, which is left in place and causes suppuration, or puncturing, with or without a subsequent injection of an irritating fluid, or in partial or total extirpation. The last is least likely to cause trouble, and is radical. —*Centralbl. f. Chirurgie*, June 23, 1883.

NERVO-TABES.—At the meeting of the Académie des Sciences, on October 15, 1883, M. Vulpian presented a communication from DR. DÉJERINE regarding an affection, the symptomatology of which bears a close resemblance to progressive locomotor ataxia, but in which the lesions are not similar, at least so far as their situation is concerned, to those found in tabes dorsalis.

The works on the subject of progressive locomotor ataxia, which have appeared in the past few years, have shown that in almost all cases the affection is characterized, in its pathological anatomy, by atrophy with sclerosis of the posterior fibres and the posterior nerve roots of the cord. There are, however, certain cases in which no lesion of the cord can be found at the autopsy, although the symptomatology, of the disease had been complete, and on this account certain pathologists have expressed doubts as to the correctness of the pathological examinations in these cases.

M. Déjerine now communicates the report of two cases in which the majority of the symptoms were those of locomotor ataxia, running through all its stages, but from which the post-mortem evidences of that disease were absent. On the contrary, there was found in these cases a sclerous atrophy of the peripheral sensory nerves, this atrophy gradually becoming less as the nerves were followed toward the cord, so that the cord itself, as above stated, showed no lesion. M. Vulpian remarked that he regarded it as of much importance to science that these observations had been reported, and that there are doubtless many such cases at present in which the lesion is confined to the peripheral nerves. M. Déjerine proposes to give this affection the name nervo-tabes, as contradistinguished from medullary tabes or progressive locomotor ataxia. —*Revue Scientifique*, October 27, 1883.

TREATMENT OF SECONDARY SYMPTOMS OF SYPHILIS. —M. GOUGUENHEIM has recently (*Bulletin de la Societe de Thérapeutique*, August, 1883) given the results of the iodide and mercurial treatment in the secondary stages of syphilis.

In 1882, from April to November, 220 patients, with primary and secondary affections, were treated by the iodide in doses ranging from fifteen grains to thirty grains. In some rare cases as much as ʒj, ʒjss, and even ʒij were given. Of the above number, 144 were cured, 44 left too soon to form an opinion, 22 were treated with mercury, *i. e.*, with liq. Van Swieten or protochloride of mercury, in pills, or by injections of peptone mercury. Of the 144 who left cured, the average stay in the hospital was 33 days. In 1881, 350 cases were treated by the mercuric method, with liquor Van Swieten, in doses of gr. ¼. 198 cases went out cured, whose average was 33 days; 68 went out improved; 84 were lost sight of by leaving too soon. The results from these statistics are equal.

From January to April, 1882, 88 cases were treated by Van Swieten's solution, in doses of grs. ss; 59 were cured; 14 left better; 15 lost sight of; average stay of those cured, 25 days. From June to November, 1883, 53 were submitted to peptone mercuric injections, in doses of gr. $\frac{1}{5}$–$\frac{1}{4}$; 20 were cured; 2 improved; 18 lost sight of; 11 were placed under iodide treatment in consequence of threatened dangerous mercurialism. For the 20 cured, the average stay was 23 days. According to this, we see the larger doses bring about a cure in much less time, 23 days instead of 33; but 11 became so affected with the mercury as to necessitate the substitution of the iodide for it.

Forty-eight were subjected to the expectant treatment, ℥ss of solution of salt being ordered, three times a day, to satisfy the patients. Out of this number, 16 were cured; 8 made better; 13 placed under iodide after the breaking out of serious symptoms; 11 were lost sight of. The 16 cured stayed only 18 days. This last number is startling at first sight, but it must be remembered that for evident reasons only the mildest cases were allowed to remain without proper treatment, and therefore must not be reckoned amongst proper statistics.

It is clear that the iodide, in doses of 15 grains to ʒss, effects a cure in about the same time as the Van Swieten's solution, when given in doses of gr. ¼, but the preference must be given to the sublimate when administered in large doses, the more so if the hypodermic injection be employed.

Comparison of the action of each with regard to special symptoms. We must find out if this inferiority in the iodide has not some compensation in other respects.

Primary Sore. If the iodide be given during this stage, the chances are there will be no secondaries. One seems as efficacious as the other.

Syphilides—erosive, papular-erosive, and hypertrophic—of the vulva and anus. Without cutaneous manifestation it is treated by local application of arg. nit., every third day. Internally, iodide or mercury is given.

Syphilides—vulvar and anal; roseola. The hydrargyrum here has a superiority, especially if injected hypodermically.

The more obstinate cutaneous syphilides, papular, squamous, palmar psoriasis, also plantar, and lichen. The superiority still rests with the mercury.

Syphilides, buccal and pharyngeal. Here we find a difference in favor of the iodide. Mercury has even aggravated such cases, and prevented a cure. Such syphilides in the mouth assume a yellowish aspect, become painful, and exhale a fetid odor, in spite of all local applications; whereas, if the local treatment is accompanied by administration of the iodide, a cure quickly ensues. This is a very important fact to know, and is very generally ignored. Here the iodide takes precedence of any other known mode of treatment.

Manifestations on the larynx. In these cases we must make a distinction between isolated papules and diffuse and hypertrophic manifestations. In the simple papular eruption of the larynx, mercury is as efficacious as iodine. It is, however, very different if we have to do with the diffuse appearance of inflammation, perhaps upon the epiglottis, which becomes thickened and implicates the vocal cords, the arytenoid region, etc., to such a degree as to threaten suffocation and asphyxia. Mercury, in such cases, is worse than useless—it is dangerous. The iodide, on the contrary, always gives the best possible results if given in large doses of ʒss, ʒj, and even ʒijss, in the 24 hours.

Insomnia, cephalalgia, diffused pains, osseous pains, arthralgia, myosalgia. Here the mercury and iodine are equally specific.

Ulcerating and secreting cutaneous syphilides very rarely seen, aggravated by mercury. Cured easily by the iodide.

Iritis cured by iodine, and by dropping atropia into the eye.

Visceral syphilides, such as pulmonary disease, with phthisical signs, cured by iodide.

Sometimes it (the iodide) produced a loss of appetite and stomach derangement. There is at times gastralgia. Mercury may produce gastralgia, in distinct pains and diarrhœa. Iodide should be given at a meal, very diluted. The hypodermic obtains the most rapid results, but is attended with difficulties not easily overcome. The iodide can produce intoxication or iodism, consisting of coryza, conjunctivitis, pharyngitis, acne, and other eruptions.

With regard to mercury. With the 31 cases treated by peptone mercury, 11 were the subjects of intoxication, such as salivation and loosening of the teeth.

Iodide is easier for administration, and the security far greater. The dangers from iodism are far less than those from salivation.

Contraindications against both drugs: chronic gastric affections contraindicate the use of either, and it is advisable to use hypodermic injections of mercury. The state of the stomach and throat will be a powerful agent in the selection of our medicines, and in all cases where the throat element is prominent we shall do well to choose the iodide. The condition of the skin may contraindicate the use of the iodide, and, where cutaneous eruptions exist, mercury will be preferable, although the iodide has been known to act beneficially in such cases.—*Midland Med. Miscellany*, Nov. 1, 1883.

CELLULOSE AS A DRESSING FOR WOUNDS.—DR. FISCHER, of Trieste, proposes the employment of cellulose as a dressing for wounds. Before it is applied, the cellulose is impregnated with water or some medicated solution; it is then covered with an impermeable substance, such as rubber cloth. This method of dressing is particularly applicable to wounds the cicatrization of which is favored by moist heat.

Fischer claims the following advantages for this method: 1. On account of its perfect purity, it is preventive of septic conditions. 2. It is extremely light, and will have none of the bad effects sometimes occurring with heavy dressings. 3. It causes neither erythema nor erysipelas in the vicinity of the wound. 4. The heat and humidity are preserved for twenty-four hours or more. 5. It does not adhere to granulating surfaces. 6. It can be perfectly adapted to any surface upon which it is desired to apply it. 7. It is cheaper than other substances used for dressing wounds.—*Journ. de Méd. de Paris*, October 13, 1883.

IODOFORM IN CHRONIC CYSTITIS.—DR. DAVID PRINCE, of Jacksonville, Ill., in an article on this subject, says that, reasoning from the knowledge of the action of iodoform upon other irritable surfaces, it seemed probable that the effect might be equally good on the bladder. For the most satisfactory effect it seemed desirable that the vehicle itself should be free from irritating properties. Starch was thought, from its unirritating nature, to meet the requirements, and the result justified the anticipation. ʒj grs. xv of iodoform, ground with ʒiss of starch and moistened with ℥viij by weight of water, of which about ℥iij by weight were injected, acted like a charm on the first trial. A soft catheter was introduced, through which the urine remaining unexpelled was discharged, after which the iodoform mixture was injected and allowed to remain.

In the treatment of a case of several years' duration, in a young woman, the recovery is rapidly progressing. In this case, there had come a stricture of the urethra, probably through reflex spasmodic action, and in introducing the dilator for enlarging the urethra, it was punctured, the dilator passing into the vagina. The dilator was withdrawn and passed in the right direction and the stretching was then effected, as if no accident had happened. The iodoform injection was next made. The rent appeared to heal by first intention, as there was never any symptom of its presence. There has since been no resistance to the introduction of the catheter, through which the mixture is daily injected. In the case of a gentleman who had suffered greatly for several years, there was no pain after the first introduction. He thought after four days' treatment that the capacity of his bladder had been doubled.

It is suggested that the treatment of moderate strictures of the urethra, accompanied by vesical inflammation, may be advantageously managed by a precursory treatment with iodoform and starch, after which the treatment by electrolysis and the mechanical means for dilatation may be employed. It is anticipated, from this experience, that the treatment may be employed for gonorrhœa.

The employment of pencils or bougies of iodoform in gelatine has been very satisfactory, but their retention cannot be prolonged beyond the first act of micturition. In the employment of the proposed injection, it may be expected that the iodoform will not be completely expelled by the first passage of urine, on account of the adhesion of the heavy crystals of iodoform to the mucous membrane.—*St. Louis Med. and Surg. Journ.*, Nov. 1883.

THE EXCISION OF INDURATED CHANCRE.—BUMM is disposed to deny any special therapeutic value to this procedure, not because he regards chancre as a symptom of general syphilitic infection, but on practical grounds. After the expiration of the first three or four weeks succeeding a suspicious connection, when the chances are still very favorable, it is difficult or even impossible to form a clear opinion as to the character of a local affection. It generally happens that the majority of patients present themselves for treatment with well-marked induration and glandular affections, and after the most favorable time for this treatment has gone by. —*Centralbl. f. klin. Med.*, Oct. 20, 1883.

EXTIRPATION OF A CANCEROUS VAGINA FOR CARCINOMA.—SCHROEDER reports the extirpation of a vagina for carcinomatous ulceration involving the greater part of the vagina. Instead of operating by the ordinary method, by dissection from above downwards, Schröder made a circular incision anterior to the orifice of the vagina; then isolating the canal by a blunt instrument carried towards the cervix, which he removed with the lower segment. He found that this method greatly facilitated the operation. It was not found necessary to apply any sutures. There were no untoward accidents and the recovery was rapid. In another case of partial extirpation of the vagina, he found it more advantageous to dissect from below upward.—*Berlin. klin. Woch.*, August 27, 1883.

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IS RESECTION OF THE CARCINOMATOUS PYLORUS A JUSTIFIABLE OPERATION?

WHEN Péan, in April, 1879, resected the pylorus for carcinoma, the procedure was denounced as a vivisection on the human subject, and the same view was entertained, outside of Germany, of Rydygier's operation practised eighteen months later. The third pylorectomy, however, in the hands of Billroth, was regarded as a great surgical triumph; and with the report of each successive case, the operator has attempted to justify his action, holding, in the event of failure, that it was not resorted to sufficiently early. In order that our readers may draw their own conclusions as to the propriety of the procedure, we present them with an analysis of the facts derived from a careful study of all the cases that have fallen under our notice. The latest reports are those of the single cases of Mikulicz and Heinecke, and the seventh case of Billroth, from the pen of Von Hacker, published in recent numbers of the *Wiener medizinische Wochenschrift*, and the two cases of Molitor, recorded by Gutsch in the *Archiv für klinische Chirurgie*, Heft 3, Bd. xxix., 1883.

Pylorectomy has been performed for carcinoma 36 times, the operators having been Billroth in 7 cases, Bardenheuer in 3 cases, Molitor in 2 cases, and Péan, Rydygier, Nicolaysen, Wölfler, Berns, Jurié, Czerny, Lücke, Kitajewsky, Weinlechner, Gussenbauer, Von Langenbeck, Hahn, Caselli, Southam, Fort, Krönlein, Tillmanns, Richter, of San Francisco, Sydney Jones, Superno, Bigi, Mikulicz, and Heinecke, respectively, in 1 case. Of the 36, 27, or 75 per cent., died, and 9, or 25 per cent., recovered.

The cause of death in 25 of the cases was collapse in 17, peritonitis in 4, collapse and partial peritonitis in 2, and inanition in 2. The majority perished within a few hours—one, indeed, on the table, 18 having died within twenty-four hours, 2 on the second day, 2 on the third day, 1 on the fifth day, and 3 on the eighth day. Of the 9 recoveries, only one month had elapsed after the operation in the 2 cases of Mikulicz and Heinecke; and nearly three months and a half had expired in Billroth's last case; 1 of Billroth's patients was doing well at the end of nine months, and 1 at the expiration of eighteen months, as reported by himself at p. 86, *Verhandlungen der Deutschen Gesellschaft für Chirurgie, Elfter Congress*, Berlin, 1882; Czerny's 1 case was living at the expiration of ten months; Wölfler's 1 case at the end of two years and a half, but a carcinomatous nodule made its appearance in the outer cicatrice in rather more than one year, which was removed by Billroth eleven months subsequently, when it was found to involve the outer surface of the peritoneum, but to have no connection with the stomach, which was in good condition; 1 of Billroth's died of recurrence in the peritoneum and retroperitoneal glands in scarcely four months; and 1 of Molitor's subjects perished in eleven months and a half of carcinoma of the rectum and pelvis, without any evidence of local recurrence, although a post-mortem examination could not be obtained.

A point of great prognostic interest is that recovery occurred in every case, 4 in number, in which the tumor is noted as having been colloid carcinoma, 3 patients being alive, respectively, at the end of one month, ten months, and thirty months, while one died of continuous recurrence in less than four months. In 7 of the recoveries, of which the notes are before us, we find that there were no complications whatever in the cases of Wölfler and Molitor, and in one case of Billroth's; that three noncarcinomatous glands were removed by Billroth in the case that was living at the end of nine months; that Billroth removed one infected gland and two nodules from the gastrocolic ligament in the case that survived nearly four months; that he removed three glands in the case that was living at the end of nearly three months and a half; that Mikulicz enucleated one gland from behind the stomach; and that Czerny, in his case that was living at the expiration of ten months, enucleated two small glands from the omentum, which slipped from his fingers and were left behind. It is not improbable that they may have become attached to the peritoneum, in which event they will act as fresh centres of infection..

In 31 of the 36 cases we are enabled to refer to the original articles in reference to the question of complications. In 8, or 25.80 per cent., there were neither adhesions nor glandular involvement, while these features were present in 23, or 74.19 per cent., the infected glands being most common in the great omentum and surrounding the pancreas, and the adhesions being most frequent to the pancreas. Adhesions were met with in 13 cases, carcinomatous glands in 13 instances, and secondary nodules in the mesocolon or omentum in 3 cases.

The time required to complete the operation varied from one hour and a quarter to five hours; only four were executed in less than two hours; and the average was two hours and forty minutes. Even in the simple or uncomplicated cases, the average was only two minutes shorter.

We have learned from the foregoing facts that pylorectomy has killed 75 per cent. of the subjects that have been selected for the operation. When the case is not complicated by adhesions or glandular involvement, the deaths number one-half. The most frequent cause of the fatal issue is shock, collapse, or failure of the heart's action, which is probably due to the prolonged influence of the anæsthetic, to the pernicious effects of the spray, and, it may be, to irritation of the stomach and solar plexus, since, in several cases, there was an almost complete cessation of the pulse on incising the organ. We have, moreover, learned that adhesions, or secondary nodules, or glandular contamination, or all of these conditions, may be looked for in 74.19 of the cases, and it is interesting to note that Gussenbauer and Von Winiwarter have shown, from an examination of the records of the Pathological Institute of Vienna, that adhesions were present in 68.26 per cent., and that the glands were involved in 59 per cent., of 542 carcinomata of the pylorus. We have seen, further, that the successes demonstrate the possibility of the operation, but, gauged by the generally accepted criterion of permanent success—namely, well-being at the expiration of three years—the recoveries fail to show a final cure. Adding to the 27 deaths the 3 cases of recurrence, 83.33 per cent. of the operations have not been productive of permanent good. Deducting from the entire number the two recoveries which were reported at the expiration of one month, and the one which was well at the end of nearly four months, but including among the failures the three cases of return of the disease, and granting to the advocates of pylorectomy as cures the three cases in which the patients remain well, respectively, for nine, ten, and eighteen months, without recurrence, 33 operations show 91.66 per cent. of failures against 8.33 per cent. of successes. This assumed success is, however, more than counterbalanced by the frightful mortality of the procedure, through which it may be truly said that pylorectomy shortens instead of prolongs life.

The advocates of the operation urge that it is usually performed too late, or at a time when the patient's health is so deteriorated that he cannot withstand the shock. This objection is only partially true. The 8 simple cases were attended with a mortality of 50 per cent., and, as we shall see presently, the 4 resections for cicatricial stricture were also followed by an equally fatal result. Hence, we are disposed to attribute the death-rate as much to the severity of the operation and the long time required to perform it, as to the condition of the subject at the time it was practised.

In view of the incurable nature of carcinoma, pylorectomy, even if attended with a death-rate of 50 per cent., is justifiable in our opinion, in proper cases, that is to say, when the pylorus alone is involved, when the tumor is small and not complicated by adhesions or glandular involvement, particularly if it be of the colloid variety, and when the condition of the patient will enable him to bear the severe shock. Were these conditions always, or frequently present, the surgeon should not hesitate to afford the patient his only chance. The diagnosis, however, in the early stages of the disease is most obscure, and there is no possible mode of determining the questions of the nature of the growth and of complications. In several of the cases an apparently mobile tumor was found to be firmly attached to the pancreas or other organs; and in one case, recorded by Billroth, in which a mobile tumor and other symptoms clearly pointed to carcinomatous stenosis, the disease proved to be a lymphoma behind the pylorus. Billroth, indeed, states explicitly that only one case out of every fifty or sixty is fit for resection. In addition to the cases in which he finished the operation, he had, up to June, 1882, opened the belly twenty times, and abandoned further precedure on account of complications. All of these cases fortunately recovered from the exploratory incision, as did also the five of Rydygier, the three of Bardenheuer, and the single cases of Czerny and Rupprecht, the patient of Verneuil having perished. In examples of this description, the obstacles to removal will be found, as a rule, to be adhesion of the pylorus to the pancreas and implication of the chain of glands in front of the bodies of the vertebræ and behind the stomach. If to these incomplete operations be added the four cases of gastroenterostomy, one case of gastrostomy, and 1 case of duodenostomy, which were resorted to to prevent starvation when the pylorus could not be removed, we have 72 cases in which pylorectomy has been finished or abandoned, with the result of prolonging life in 4, or 5.5 per cent. on an average, for seventeen months.

Although the technique of the operation is almost perfect, the obstacles to the proper insertion of the sutures, and to fashioning the wound of the stomach to that of the duodenum are not easily surmounted by the surgeon who has to deal with his first case. If to these difficulties be added the adhesions met with in so large a proportion of the cases, along with the shock which of necessity must attend so prolonged an operation, it is obvious that pylorectomy must be excluded from general surgery. Indeed, in view of its great mortality, of recurrence in one-half of the cases that had survived long enough to determine this point, and of the doubts as to the final termination of the remaining cases which were living at the date of the last reports, it is questionable whether it should be repeated by those who have had the most experience with it.

The pylorus has also been resected for stenosis arising from ordinary causes 4 times. In 3 cases it was removed for stenosis from ulcer, the operators having been Rydygier, Lauenstein, and Van Kleef. The patient of Rydygier was in good condition seven months subsequently, and advanced five months in pregnancy. The case of Lauenstein perished from gangrene of the transverse colon on the seventh day. The patient of Van Kleef was living at the expiration of six months. In the fourth example, Billroth operated for obstruction due to the swallowing of caustic soda, and death ensued on the sixth day from peritonitis, the contents of the stomach having escaped into the peritoneal cavity from the giving away of six of the stitches. The mortality of the operation for stenosis is, therefore, 50 per cent. If these cases be added to those of resection for carcinoma, we find that 40 pylorectomies have resulted in 29 deaths and 11 recoveries, the percentage of the former being 72.5, and of the latter, 27.5.

With a view to complete the surgery of gastric resections, we may be permitted to recall the attention of our readers to the successful removal of a portion of the stomach for chondroid fibroma, by Cavazzini, and to the case of extirpation of a portion of the anterior wall of the greater curvature for carcinoma, by Koehler, which died of collapse in six hours.

ACTINOMYCOSIS—"SWELL-HEAD."

At the request of the Chicago Commissioner of Health, Oscar C. DeWolf, M.D., an investigation of the bovine disease popularly known as "swell-head" or "lumpy jaw" has been recently instituted by Dr. W. T. Belfield.

A brief summary of the facts developed during the investigation must be of interest to the profession in general, apart from its particular value to the sanitarian. A large number of cattle affected with "swell-head" from all parts of the West, have arrived in Chicago, but owing to the enforcement of stringent regulations by the Inspector of Cattle at the Union Stock Yards, the proportion has been greatly decreased. Five animals were examined by Dr. Belfield. Four of them were in poor condition; their hides were roughened and their bodies presented varying degrees of emaciation. In these animals the disease had attained its greatest severity. The fifth animal was in good order and the symptoms of the disease were less plainly marked.

Macroscopic examination revealed a globular tumor, varying in size from that of an orange to a musk melon, situated in the facial region in each affected animal. Three of these tumors were firmly attached to the superior maxilla, one to the inferior maxilla, while the fifth was located below the orbit. The tumors connected with the jaw-bones were hard, resisting, and gave to the touch the sensation of cartilage. Different points upon the periphery were soft and semi-fluctuating. The surface of each tumor was ulcerated and covered with thick pus. The tumor below the orbit was soft and fluctuating.

Upon section, the greater portion of each tumor was found to be composed of a hard white substance, resembling fibro-cartilage, firmly attached to the periosteum. The boundary-line between the tumor and true osseous tissue could not always be discovered. The osseous tissue was swollen, softened, honeycombed with cells, and filled with thick pus. The soft, fluctuating points were found to be cavities filled with pus. In the pus were found numerous small yellow bodies, resembling yellow miliary tubercles, about the size of a pin's head.

Microscopic examination showed the mass of the swellings to be composed of firm, connective tissue, and the miliary bodies to be groups of microscopic plants, called actinomyces, which belong to the class of radiating fungi.

From this examination, the diagnosis of actinomycosis was made.

To the best of our knowledge, this constitutes the first recognition of actinomycosis in America. The disease itself has been known for a long period of time under such names as "swell-head," "lumpy-jaw," sarcoma, cancer, and tuberculosis.

Bollinger, Royal Professor of Veterinary Surgery in Munich, discovered the actinomyces in a case of "swell-head" in 1877, and suggested the name of the disease. His researches were abundantly confirmed by the results of other investigators. Ponfick and Johm proved the causative relation existing between actinomyces and the disease "swell-head." The fungi were separated from the tumor, cultivated, and injected into the veins and abdominal cavities of different animals. These experiments resulted in the production of a disease identical in all its characters with the original affection.

The habitat of the actinomyces has not as yet been discovered. A plausible theory is that the plants have their origin in the cereals, and it is supported by the facts that actinomycosis occurs only in graminivorous animals, and that the disease affects, by preference, the jaws, tonsils, and such portions of the body as come into contact with grains. In the case examined by Dr. Belfield, he was unable to trace the entrance of the parasite through carious teeth.

The course of the disease in cattle is various. A certain number of spontaneous cures have been recorded. The disease, as a rule, remains localized, although cases of embolic deposit in every organ of the body are known.

More than thirty cases of actinomycosis occurring in the human species have been reported by German observers. In man the disease seldom remains a local affection, and is invariably fatal. Every organ and tissue of the human body is liable to invasion, and it simulates other diseases very closely. The human body seems to afford a highly congenial soil for the propagation of this parasite.

Actinomyces probably gain entrance into the human system through carious teeth, or abrasions upon the skin surface. The disease is contagious, in so far as it can be conveyed from a diseased to a healthy animal. It has not been demonstrated that it may be conveyed from an animal to man.

Two species of actinomyces have been discovered by German observers, and Dr. Belfield is of the opinion that the plant recently discovered in Chicago presents important points of difference from those already described.

SANITARY INSPECTION OF SCHOOLS.

We are glad to observe that the subject of the sanitary inspection of our schools is day by day eliciting more and more attention in different parts of the country. A recent inspection of some of the public schools in Brooklyn has brought to light unsuspected and serious defects in the sanitary arrangements, which furnishes proof of the necessity for instituting a regular and systematic inspection of the schools of that city. Similar examinations have been made of some public schools in New York City, and thus far with like results. The Board of Health, realizing the situation, have determined to undertake a sanitary examination of all the school buildings, employing for this purpose a large corps of sanitary inspectors who are to make frequent reports upon the results of their labors.

In 1882 the Philadelphia Board of Health requested Councils to authorize the employment of four sanitary inspectors of schools, whose entire time should be devoted to a service modelled after that adopted with such satisfactory results in Brussels. The duties of the single medical inspector in the employ of the city and of the port physician would not admit of the diversion of their time to this new field of labor. The request was not granted. This year the request was renewed and the importance of the subject was fully presented to the Finance Committee, which committee shapes the appropriations of the city and exerts a potent influence upon the legislation of Councils in all matters of finance. The item was not allowed, but in lieu thereof a small appropriation was granted for the expenses of a horse and carriage for the medical inspector, upon the condition that he inspect the schools and report the results of his labors at the end of the year. While this action is an admission of the need of the service, it shows how thoroughly misunderstood are its requirements. We hope the Board of Health will persist in their demands for a proper recognition of the importance of this branch of sanitary administration until the obstructionists in councils shall be obliged to yield to the pressure of enlightened public opinion.

A NEW METHOD OF RESECTING THE KNEE-JOINT.

In the *British Medical Journal* for October 20, Mr. Richard Davy, of the Westminster Hospital, London, describes a new mode of excising the knee-joint, by means of which the bones are maintained absolutely immovable, and the parts need not be disturbed from the date of operation until the patient has recovered. The case he reports was that of a girl, sixteen years of age, suffering from angular deformity of the knee, the result of resection practised thirteen years previously. After removing a rectangular wedge from the femur and tibia, a mortice was cut in the head of the tibia, into which the femur, shaped as a tenon, was impacted up to fixity of tenure by pressure on the foot. The limb was swung in an appropriate splint, and, without any special dressings, the recovery was complete on the one hundred and thirtieth day, the girl walking well with the aid of a cork boot, firm osseous ankylosis having occurred. The operation has been repeated by Mr. Macnamara, the subject being still in the hospital.

Tibio-femoral impaction, as this novel procedure is termed, effectually guards against displacement of the bones, which is one of the most trying circumstances with which the surgeon has to contend in resection, as ordinarily practised. While it is true that the operation interferes with the subsequent growth of the limb in children, Mr. Davy very properly claims that a human foot attached to a shortened ankylosed limb is far more useful than an artificial limb adapted to a thigh stump; and he therefore does not hesitate to recommend his operation as a substitute for ordinary excision in young persons. The same method of impaction is also applicable to ununited fractures.

SAD FATE OF THE YELLOW FEVER MICROBE.

M. LACERDA, of Lisbon, found in the liver and kidneys of yellow fever subjects a parasite, supposed to be the infective principle. Portions of these organs containing the parasite were examined by MM. Cornil and Bebes, but these expert sceptics ascertained that Lacerda's microbe consists of bits of vegetable tissue and pigment. *Exeunt omnes.*

REVIEWS.

THE PRINCIPLES AND PRACTICE OF SURGERY. By D. HAYES AGNEW, M.D., LL.D., Professor of Surgery in the Medical Department of the University of Pennsylvania. Vol. III. Royal 8vo. pp. 784. Philadelphia: J. B. Lippincott & Co., 1883.

WITH admirable dispatch this volume succeeds its predecessors and worthily completes the *magnum opus* of its author. In wealth of illustration, in details of personal experience, in the thoroughness with which the subjects it treats of are dealt with, and brought up to the present state of surgical knowledge, it appears to be in every way the equal of its fellows.

Dr. Agnew is an all-round surgeon, and in this volume treats matters which of late years have been very much relegated to the domain of specialists. Thus in successive chapters are treated surgical diseases of the larynx and trachea; of the nose, nasopharyngeal region, and associated parts; of the eye and its appendages; of the ear, and malformations and deformities. Nor are these subjects treated in a cursory or superficial way, but the practitioner who turns to them will find that, while condensed in form, they represent the very latest knowledge, and include pretty much all that he will care to know. The specialist may wish to study more ample monographs, but he will find in these chapters of Dr. Agnew not only the accretions of special inquiries, but the deliberate judgments of one whose experience has been vast, and who has arrived at his conclusions from the broad ground of a general surgeon, and a careful, acute observer.

The chapter on syphilis will be read with much interest. Dr. Agnew occupies a middle ground, holding that both chancre and chancroid may be derived from the same source, the former being the result of inoculation with a peculiar germinal principle, wherein lies the essence of the syphilitic poison, while the latter results from inoculation with the purulent material accompanying this germinal principle. Dr. Agnew gives the influence of his great name in favor of proper legislation to regulate prostitution, opining that as the State can not be charged with complicity in arson, theft, and fornication, because it passes laws which are restrictive of these crimes, it cannot with justice be charged with winking at immorality because it passes and enforces laws which Dr. Agnew's experience tells him will be highly advantageous to the public health.

In the chapter upon tumors will be found a comprehensive epitome of every recognized form of abnormal growth, and here as elsewhere, the thoroughness with which the pathology has been brought up to the present time is a very noticeable feature of this great surgery.

In other chapters there are considered affections of the muscles, tendons, bursæ, and aponeuroses; surgical affections of the nerves; surgical affections of the lymphatic system, skin, and subcutaneous connective tissue; and diseases of the mammary gland. Full, accurate, and experimental they will all be found.

Electricity in its application to surgical therapeutics; the various operations for nerve-stretching, and massage are the subjects of the last three chapters.

Those who enjoy the personal acquaintance of Dr. Agnew will recall the feeling of relief they experienced when they knew that he had been summoned to the bedside of President Garfield, and the perfect confidence they enjoyed in knowing that every thing would be done that human skill could dictate, a confidence which has been unshaken by notorious criticisms either at home or abroad, and as they turn over the pages of this volume they will be glad that the profession at large has an opportunity to know the extent of the skill and the profundity of the knowledge which was joined with that of Professor Hamilton in the case of the man to whom so many hearts went out in tender sympathy.

We most heartily congratulate Dr. Agnew upon the completion of his arduous task, and do not hesitate to proclaim our opinion that this treatise on surgery is fully entitled to take and maintain a place in the very front rank among works of its kind.

SOCIETY PROCEEDINGS.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, October 9, 1883.

THE PRESIDENT, T. M. MARKOE, M.D., IN THE CHAIR.

CICATRICIAL CONTRACTION FROM A BURN.

DR. A. C. POST presented a patient, for whom he was indebted to the President. A boy, two and a half years of age, was admitted to the Presbyterian Hospital on the 17th of September. One year previously he had been burned by falling against a stove. Only one finger of the left hand was injured, namely, the index, which was bent and held by a cicatricial band. The right hand was burned much more severely; the thumb escaped, but all the fingers were contracted, the amount of contraction diminishing from the index to the little finger. The terminal phalanx of the index was bent at quite an acute angle. Dr. Post divided the bands of cicatricial tissue through the entire thickness of the indurated parts at intervals of about three or four millimetres, and was able to bring the fingers into a straight position. The operation was performed on the 18th of September, upon both hands. The splint was removed from the left hand on the 24th of September, and had not been reapplied. The splint had not been omitted from the fingers of the right hand, although they were perfectly straight and the tissues were flexible. The treatment consisted in free multiple incision through cicatricial bands, forcing the fingers back and applying a narrow splint of malleable iron covered with tissue-paper, extending upward to about half the length of the forearm. Recently, Dr. Post had treated the operation wounds in this class of cases by first dressing the parts with carbolized oil or vaseline, and at subsequent dressings sprinkling them very freely with nitrate of bismuth to fill up all the interstices between the incisions. He had found that the bismuth dressing answered an exceedingly good purpose. The granulations had been kept down in this manner, the wounds had been in a remarkably healthy condition, and with but very little suppuration.

THE PRESIDENT remarked that the restoration was an exceedingly gratifying one to him, as the deformity was very great when he saw the patient.

EXCISION OF A PORTION OF THE SPINAL ACCESSORY NERVE FOR SPASMODIC TORTICOLLIS.

DR. H. B. SANDS presented a patient, thirty-nine years of age, a druggist by occupation, who had consulted him in May, 1882, on account of the disease, which first appeared nine months previously. The attacks of spasm were at first less frequent than they became subsequently, and produced a rotary movement of the head, causing it to turn forcibly to the left side. No effort on the part of the patient could prevent the movement. In the beginning, the turning of the head occurred about once in three minutes; subsequently, it became more rapid, and it was estimated that the intervals between the movements did not exceed three seconds. Before he came under Dr. Sands's care he had been treated by Dr. Seguin, who had thoroughly administered hyoscyamin, the bromides, atropia, conium, and other remedies, but without any beneficial result. The patient, when Dr. Sands first saw him, was quite weak, and the contraction of the sterno-mastoid upon the right side was almost constant. It was decided to excise a portion of the spinal accessory nerve, which was assented to. In a previous operation he had followed the plan suggested by the late Mr. de Morgan of making an incision along the posterior margin of the sterno-mastoid muscle, exposing the nerve and tracing it forward, but he had found this procedure difficult and unsatisfactory. He therefore determined to try an operation by which the nerve could be reached not far from its exit from the skull; just in front of the point where it penetrates the muscle he made an incision three inches in length along the anterior margin of the sterno-mastoid, beginning close to the mastoid process. After exposing the muscle and turning it outward, he readily found the spinal accessory nerve, where it crosses the internal jugular vein, which was felt, though not seen, during the dissection. A piece of the nerve one-fourth of an inch in length was excised, and the wound was closed by sutures and covered with an iodoform dressing. Healing by adhesion was complete on the 24th of May, nine days after the operation. Immediately after the operation, the sterno-mastoid ceased to contract, and it is now paralyzed and atrophied. The patient, however, did not recover immediately from the torticollis, as there still remained a marked tendency to rotation of the head toward the left side, this being due mainly to contraction of the left splenius muscle, which could be felt as a thick, hard mass. On the 7th of June, however, the condition of the patient was very much improved, and by the middle of June he was nearly free from spasm. For six months afterwards he continued to suffer at intervals, and regained entire control of his movements only after going into the country and improving his general health. Even now he occasionally finds that his head is disposed to turn to the left side, but he has no difficulty in preventing this movement, or in turning to the right. Considering his distressing condition when he came under Dr. Sands's observation, the result must be regarded as quite satisfactory.

Dr. Sands also presented another patient, an expressman, aged 31, upon whom he had performed a similar operation and removed two-fifths of an inch of the spinal accessory nerve on the 25th of June of the present year. The patient had been engaged as an expressman for fourteen years, during which time it had been his habit to carry trunks upon his right shoulder, turning his head well toward the left side, thus, in his opinion, laying the foundation of his disease. Four or five months before he came to Dr. Sands, he began to experience some difficulty in turning his head to the right side, and also became subject to clonic spasm of the muscles which turn it to the opposite direction. Seven weeks before the operation he was treated by the application of the actual cautery along the course of the affected muscle, but without any good effect. The treatment, however, was followed by tonic spasm of the muscle, so that from that time there was no longer a rotary movement, but an extreme rotation toward the left side, so that his face looked over the left shoulder. The case, then, resembled more one of ordinary torticollis than it did one of clonic spasm. In this instance, the discovery of the nerve at the time of the operation was more difficult than in the former one, and the internal jugular vein was more distinctly exposed. The wound healed without suppuration, and on the 18th of July, he left the hospital much improved. As in the other instance, the sterno-mastoid and trapezius were paralyzed, yet recovery was gradual. For several weeks he had some difficulty in keeping his head in the proper position. He is now, however, quite well. In this case, two or three weeks after the operation it was noticed that the head was still inclined to turn towards the left side, the left splenius, the trachelo-mastoid, and the inferior oblique being probably the muscles contracting. Dr. Sands believed that it was usual in cases of spasmodic torticollis to find that the sterno-mastoid is not the only muscle affected. In a case reported by Mr. de Morgan many muscles were involved, including those of the eyeball. Dr. Sands had seen a case about a year ago, in which the integument could be observed to be raised during spasmodic contraction of the omo-hyoid.

The cure by division of the nerve seems to be gradually effected, and to be due to the cutting off of the nervous supply of one of the principal muscles involved in the disease. He did not feel certain of a permanent result in either of these cases, but the condition is now such as to afford great encouragement. He regarded the operation by dividing the nerve anteriorly as far better than that suggested by Mr. De Morgan, because by cutting in front the nerve can be reached before it divides into two branches, and a portion of the common trunk exsected quite near to its exit from the skull.

DR. F. LANGE had had a similar case in which he gave temporary relief by stretching the spinal accessory nerve. The benefit remained for only a few weeks. It was evident that the clonic spasms were mostly due to action of the muscles in the rear part of the neck on the opposite side, and he therefore finally cut through the principal muscles upon the opposite side of the neck, which gave an apparent cure for a shorter period of time. But the trouble then recurred, although to a somewhat less degree. What the final result was he was unable to state. It was certain that in this case the action of the sterno-mastoid was entirely paralyzed by the stretching of the nerve. The muscle had been divided frequently by other surgeons previously to the stretching, yet it acted well before Dr. Lange performed his operation.

FOREIGN BODY IN THE LEFT BRONCHUS; REMOVAL; CURE.

DR. R. F. WEIR presented a patient, a woman, twenty-five years of age, who, on the 26th of August, went to have a tooth extracted. While partially under the influence of the anæsthetic, a portion of the tooth escaped from the forceps, and was inhaled. She suffered from marked dyspnœa, which continued for some time, but finally she got easier, and went home. From that time until six days afterwards, she had frequent attacks of dyspnœa, which were relieved very much by the administration of morphine. When Dr. Weir first examined the patient, he found evidence of obstruction at the level of the sixth dorsal vertebra, and two inches to the left of the median line, where could be heard a whistling sound that extended from the lower portion of the lung. When she was in the erect position, this sound disappeared from the chest. After she had entered the hospital, the attacks of dyspnœa were becoming more frequent, and on the thirteenth day after the tooth had become loosed in the chest, the operation for the extraction of the foreign body was performed. Prior to opening the trachea, an attempt was made, while under the influence of the anæsthetic, to dislodge the foreign body by inverting the patient, and shaking her, jarring the chest, etc.; but as it was unsuccessful, tracheotomy was resorted to, with the patient's head strongly thrown back, the opening being made as low down as possible. Several rings were divided, and an opening made sufficiently large to admit the finger, which Dr. Weir endeavored to pass into the trachea, but this he was unable to do. He then introduced a bent forceps, like the ordinary nasal polypus forceps, carrying them to a depth of four and a half inches, entered the left bronchus, and was able to touch the foreign body, but could not seize it. Different bent forceps were then introduced, but he failed with each in catching the tooth. A piece of wire, slightly twisted to form a loop, was tried, and the same loop, bent upon itself to form a hook, was also introduced, but without success. Before ceasing instrumental interference, it was finally determined to use a wire, to which a number of threads had been tied. While this was being prepared, Dr. Little suggested that an ordinary piece of silver wire be bent into the form of a loop, and introduced. This was quickly prepared, and Dr. Weir passed it deeply into the air-passages, and happily it caught upon the foreign body. The resistance, however, was so firm that he did not dare to make very much traction; but with the wire held taut, he introduced the forceps, passing them along by its side, and with the wire and the forceps he succeeded in withdrawing the foreign body, which was the smaller half of a wisdom tooth. The tooth seemed to have been lodged upon the anterior wall of the bronchus—that is, the line of traction seemed to have been in that direction. The opening in the trachea was made so low down that, when the muscles were relaxed, it was found that the lower half of the incision was below the sternum. Only a very slight amount of bronchitis followed the operation, and complete recovery took place.

Dr. Weir also reported a case, that of a child two years of age, who inhaled a coffee-bean two days previous to the one just reported, and in whom he performed also tracheotomy for its extraction. When the patient was first seen, the house surgeon was about to perform tracheotomy, but just as the skin was divided, the child suddenly ceased coughing, and breathed so easily that the operation was abandoned on the supposition that the foreign body had been removed. Two hours later, however, when Dr. Weir first saw the case, the child was breathing with considerable difficulty. He then opened the trachea, searched above and below, but did not feel the foreign body. A suture was introduced on each side of the opening, so that the edges of the wound could be held open, if at any time it became necessary to further explore the trachea. The progress of the case proved that this was a wise precaution, for soon afterward the child was found breathing very peculiarly. The tube which had been introduced was withdrawn; the wound in the trachea was held open by means of the sutures, and out popped the roasted coffee-bean considerably swollen. Pneumonia developed, and the child died on the fourth day afterward.

Dr. Sands said that an unsuccessful attempt to explore the trachea by means of the finger in Dr. Weir's case, recalled to his mind a case which occurred many years ago in St. Luke's Hospital. The man had a portion of an India-rubber tracheotomy tube lodged in the left bronchus, and some difficulty was experienced in determining exactly where the foreign body lay; in that instance Dr. Sands passed his finger down through the tracheal wound and immediately detected the foreign body just below the point of bifurcation. A forceps was then inserted and the foreign body extracted. Since making this discovery, he had often demonstrated upon the cadaver that he could pass his finger into the trachea always as low as the place where it divides, often being able to cause the extremity of the index-finger perhaps to enter either bronchus a distance of half an inch. This mode of exploration may be of great value, by enabling the surgeon to determine exactly where a foreign body lies, so that it can be readily seized with a forceps.

The President remarked that these cases illustrated one point in diagnosis which had interested him. In a case which he had some time ago, one in which a shirt-button passed into the right bronchus, and which he extracted with the forceps after tracheotomy, Dr. J. R. Leaming made the diagnosis as to location of the foreign body. In that instance the obstruction was manifestly in the two lower lobes of the right lung; the upper lobe being perfectly resonant and the respiratory murmur distinct. In the case which Dr. Weir has now reported, the position of the foreign body was determined by the fact that the whole left side showed absence of respiratory murmur. In the right bronchus, the bronchial branch which goes to the upper lobe, sometimes comes off very near to the bifurcation, and from this point there is quite a distance before the next division takes place. It is between the first branch and the second point of division of the bronchus that the foreign body lodges when it enters the right bronchus. When a foreign body enters the left bronchus there is no branch until the tube breaks into its final divisions, nearly two inches from the trachea; and, therefore, when this left bronchus is obstructed, all entrance of air is excluded from the whole of the left lung.

REMOVAL OF ENTIRE TONGUE, SUBMAXILLARY, AND SUBLINGUAL GLANDS AND THE LATERAL WALL OF THE PHARYNX, BY KOCHER'S METHOD; CURE.

Dr. Bull presented a man forty-one years of age, who had been in good health up to four months before admission to hospital. At that time he observed a small ulcer on the left side of the tongue, and at the same time a swelling under the jaw. Both increased rapidly in size, the tongue becoming hard about the edges of the ulcer, and causing severe pain at night and while eating. His appetite had continued good, and he had not materially depreciated in weight or strength. On examination, a ragged, excavated ulcer was found on the left side of the tongue about its middle, reaching upwards to the dorsum, backwards as far as the palato-glossal fold, along which it extended to the mucous membrane covering the posterior end of the internal pterygoid muscle. Its edges were indurated, surface sloughy, discharge sanious. The submaxillary gland formed a mass of twice its normal volume, but was not hard nor tender. No other enlarged glands. A piece of the edge of the ulcer under the microscope proved to be epithelioma.

Operation August 11th. Preliminary laryngotomy was done and the pharynx stuffed with sponges on strings. By raising a triangular flap the submaxillary triangle was explored, the facial artery and vein ligated, the submaxillary gland removed, then the lingual artery and vein tied, and the sublingual gland with one-half the tongue removed with the scissors as far back as the hyoid bone. The other half was removed in the same way, as well as the mucous membrane of the pharynx beyond the posterior pillar of the fauces, and as low down as the hyoid bone—including that covering the inferior and posterior part of the pterygoid muscle. A hard enlarged gland was now found under the sterno-mastoid, closely adherent to the carotid sheath, and extirpated. Several bleeding spots were touched with the cautery. Moderate bleeding occurred during the operation, as all the large vessels were tied before being cut, and the forcé-pressure forceps were freely used. The wound was left open, the raw surfaces covered with iodoform gauze and absorbent cotton, and percha tissue applied over it. The pharynx and mouth were stuffed with gauze moistened with Thiersch's solution of boracic acid one part, salicylic acid six parts, water five hundred parts; the tracheal tube was covered with a carbolized compress. The only nourishment given during the first twenty-four hours was two enemata of beef-peptonoids with whiskey; after that the stomach-tube with a funnel attached was introduced twice daily, the gauze in the mouth being renewed each time. Between two and three pints of milk, and later, beef-tea, soup, and milk-punch were administered at one time. The iodoform gauze was not changed till the sixth day; after that the gauze in the mouth was discontinued, and the iodoform gauze renewed once or twice daily, the granulations being sponged with the boro-salicylic solution. There was no constitutional reaction, the pulse not going above 90, nor the temperature above 99°. On the fourth day the man sat up for several hours. On the seventeenth day he took food himself, although the wound would admit three fingers. The discharge was moderate, never offensive. The wound was the size of a goose-quill at the end of five weeks, reduced to a trifling sinus a week later, and entirely closed at the end of seven weeks. The cicatrix is drawn up behind the lower jaw, the motions of which are not impeded. There is no sign of recurrence. The contraction of the cicatrix has drawn the anterior pillars of the opposite side of the fauces markedly towards the median line.

Dr. Weir exhibited several new instruments designed to aid in controlling hemorrhage during operations. Among these were Tait's and Esmarch's forcé-pressure forceps, Jouillard's forceps for removal of goitre, and a ligature-carrier of his own device.

COMPOUND FRACTURE OF THIGH AT JUNCTION OF SHAFT WITH LOWER EPIPHYSIS; AMPUTATION OF THIGH.

Dr. A. C. Post presented a specimen with the following history: September 16, 1883, I was called to see W. D., a boy, eight years of age, in consultation with Dr. Lathrop, of Wurtsboro, and Dr. Van Winkle, of this city. About two months before I was called to see him, he was with his father's family in the country, and, riding in a wagon, his left knee was caught between the spokes of a wheel, and violently wrenched. The result was a fracture of the thigh at the junction of the shaft with the lower epiphysis, the end of the shaft projecting through an extensive wound on the outer side of the knee. The severity of the injury was such that Dr. Lathrop, who was called in, recommended immediate amputation; but the parents would not consent. The patient was brought to town the day before I was called to see him. I recommended that the patient should be etherized, and the limb thoroughly examined.

17th.—The patient was etherized. The limb was much swollen from the middle of the thigh to the foot There was an extensive wound on the outer side of the knee, through which protruded the end of the shaft of the femur, detached from the epiphysis, and in a state of necrosis. Sinuses extended through different parts of the thigh, leg, and foot. There were sloughs over the sacrum and over the heel. The posterior part of the os calcis was exposed and carious. Portions of the shaft, of the tibia, and fibula were exposed and rough, indicating superficial necrosis. The anterior extremities of the astragalus and cuboids were exposed and rough. Several of the other tarsal bones were in a similar condition. The patient was very pale and emaciated, but his appetite and digestion had been pretty good. I performed amputation in the middle of the thigh. The incision passed through the upper end of an abscess, through which a finger could be passed up four or five cm. The operation was well borne, and very little blood was lost. The wound was thoroughly washed with carbolic acid, 1 to 40, a tent introduced into the suppurating cavity, and the edges of the wound brought together with sutures. Absorbent cotton was applied, and pressure made with a roller-bandage. On examining the limb, the epiphysis was found *in situ*, but eroded, and almost denuded of cartilage. The head of the tibia was in a similar condition. The knee-joint was disorganized. The medio-tarsal articulation was open; the cartilaginous surfaces of the astragalus, cuboids, navicular, and two of the cuneiform bones were eroded. One of the cuneiform bones had been discharged.

18th.—Patient was troubled with vomiting after the operation, and he has not regained his appetite. He has slept for a number of hours; his pulse is steady, and not very feeble. Directed milk with arrowroot and a little brandy, as the patient can be induced to take it.

19th.—Dressed wound, and removed several of the sutures. Patient has moderate diarrhœa, but no vomiting. Ordered t. opii camphor. p. r. n.

21st.—Dressed wound again; the edges have receded at lower part. Removed all the sutures; washed wound with carbolic acid, 1 to 40. Applied emp. adhes. and bandages to close wound. Diarrhœa continues. Ordered mist. creta with t. op. camphor.

25th.—Decided improvement in general condition. Wound granulating.

Oct. 3.—Wound rapidly healing. General health steadily improving.

9th.—Continued improvement.

Dr. W. T. Bull presented a specimen of

SUBPERITONEAL FIBROID TUMOR OF THE UTERUS, WITH BOTH OVARIES AND STUMP OF THE UTERUS REMOVED BY LAPAROTOMY.

A single woman, æt. 34, was admitted to his service at St. Luke's Hospital, in August of this year, with a history of frequent backache, dragging pains in lower part of abdomen, and vesical tenesmus for three years previously. Menstruation regular. In the middle line of the lower part of the abdomen was a smooth and rounded tumor as large as a child's head, plainly felt above the pubes and in the cul-de-sac of Douglas. It was movable, not tender, apparently cystic, and the uterus, which lay in front of it, was anteverted and thrown over to the right, where the fundus could be felt through the abdominal wall. I had seen the woman six months before, when the tumor was no larger than an orange, but after Dr. Thomas and Dr. Hunter had advised against operation, I decided to wait. On her entering the hospital again, Dr. C. S. Ward agreed with me as to the advisability of operation, which was performed on August 14th. After exposing the tumor by an incision five inches long, adhesions were found to the ovaries and uterus. A double silk ligature, carbolized, was passed round each broad ligament. The uterus, just above the vaginal junction, was first temporarily constricted with an écraseur, and the tumor cut off an inch and a half beyond this. The pedicle (uterus) was then transfixed and tied with carbolized silk, cut off again half an inch beyond the silk, rubbed with iodoform and returned. On the left side of the pelvis the torn surface of the broad ligament bled; one silk ligature was applied and the surface rubbed with iodoform.

The sutures were removed on the fifteenth day; temperature ranged between 98° and 99.5° F. On the second, third, and fourth days there were vomiting and slight abdominal pain and tympanites.

The tumor was examined by Dr. Ferguson, who reported that it was a fibro-myoma; subperitoneal, from the posterior surface of the uterus, about equally from the body and neck. The ovaries are normal in size, the left containing two small cysts. The uterine body is slightly enlarged and laterally flexed. The neck above the point of section is elongated. The mucous membrane is normal.

Dr. E. L. Keyes exhibited the different kinds of forceps used by Sir Henry Thompson in *removal of tumors of the bladder.*

CINCINNATI ACADEMY OF MEDICINE.

Stated Meeting, November 5, 1883.

The President, W. W. Seely, M.D., in the Chair.

(Specially reported for The Medical News.)

Dr. Joseph Ransohoff, F.R.C.S. Eng., reported the following case of

RETRO-PERITONEAL CYSTO-SARCOMA:

J. H., æt. 33, a baker. Father died aged 73; mother died when patient was a child. Three brothers and sisters died in childhood. Patient states that he has never been seriously ill prior to the beginning of the present illness, although for a number of years he has been addicted to drinking beer in large quantity. When the present trouble commenced, he also averaged nearly a pint of whiskey daily. Has had gonorrhœa twice, but has never had syphilis. Has had an inguinal hernia of right side from childhood. Two years ago he observed a swelling of the left foot, followed in the course of a week by that of the right. The œdema rapidly involved the legs and thighs and reached the abdomen. The abdomen has since continued to enlarge in its uppermost part, although the swelling of the extremities speedily subsided. Nearly a year ago, a physician in Covington tapped him for ascites, but no fluid escaped. While considerable dyspnœa has been felt during a year past, there has never been any marked pain. Vomiting has never been a symptom of the case. The bowels have been regular, but a decided loss of appetite has existed. Suffered six months ago from hemorrhoids. Emaciation has been marked. Two years ago the patient weighed one hundred and eighty-five pounds, his present weight is one hundred and forty-five pounds.

The present condition of the patient, as revealed by his facial expression, is that of anxiety rather than of suffering. The skin is of a sallow hue; lips pale. The nostrils play freely during the respirations, which number thirty per minute. Patient walks with difficulty and is unable to assume the recumbent posture at night. Physical examination reveals no abnormity of the thoracic viscera. The upper portion of the abdomen is greatly distended, particularly in the right hypochondrium. Running from the umbilicus towards the iliac fossa and towards the chest are numerous large varicose veins. Palpation reveals, occupying the upper portion of the abdominal cavity, a firm mass which moves with respiration and is absolutely smooth upon its surface. Measurements of abdomen: at umbilicus, forty-two and one-half inches; at greatest prominence, three inches above, nearly forty-five inches. Percussion elicits a flat sound extending in right mammary line from the fourth rib to the level of the umbilicus; and in the axillary line to within two inches of the iliac crest, in the median line to the umbilicus. In the left mammary line it extends two inches below the margin of the thorax. The lower portion of the abdomen yields normal resonance. Palpation over this region revealed an absolutely smooth surface and unmistakable fluctuation over the region of greatest enlargement. Repeated auscultation failed to reveal anything like a vascular growth. The needle of an aspirator was introduced here, and two ounces of fluid withdrawn. Chemical and microscopical investigations of this fluid by Drs Kebler, French, Eichberg, and Forchheimer showed that it contained large numbers of liver-cells in diverse stages of disintegration, numerous red and white blood-corpuscles, crystals of tyrosin and albumen.

All these studies of the tumor led us to the conclusion that it must be intimately related to the liver, if not an integral part of it. For a basis of diagnosis there were but two possibilities, between which a positive final diagnosis could not and was not made. These two lesions were echinococcus and malignant disease of the liver. The age of the patient, the absence of marked cachexia, of ascites, and of pain; the slow growth of the tumor, its even surface; fluctuation; the absence of primary malignant disease in other parts, and the non-implication of the lymphatic glands rendered the presence of a malignant growth exceedingly improbable.

The symptoms all pointed more directly toward an uncomplicated echinococcus cyst, the turbidity of the fluid withdrawn being due to inflammatory changes and hepatic detritus.

At the urgent request of the patient, whose life was useless and a burden to him, and with the consent of his family, an exploratory incision was determined upon. This was made in the presence of Drs. Whittaker, Palmer, Kebler, Eichberg, Ravogli, and Krouse. The patient was anæsthetized, and an incision four inches in length was made over the greatest prominence in right hypochondrium. A few ounces of serous fluid escaped. The surface of the liver lay exposed, smooth, glistening, and free from adhesions. The fluctuation was now quite superficial. After due consultation it was decided to open the cyst. The surface of the tumor was firmly fixed to the edges of the incision by a number of silver wire sutures. The exposed surface of the growth was divided by the thermo-cautery. A half-pint of clear fluid escaped and was followed at once by the discharge of a soft friable substance, like disintegrated brain-matter. The hemorrhage attending this discharge was alarming. The finger introduced felt a large cavity filled with this same detritus.

The diagnosis was no longer questionable. Recognizing the malignant character of the growth and appreciating the uselessness of further procedures, the cavity was plugged with sponges covered with boracic acid, and the wound dressed. Whiskey, morphia, and ergotin were freely administered during the following night.

On the day after the operation, the dressing became stained with blood and was removed, but the sponges were not disturbed. The patient complained of no pain or tenderness. The abdomen below the tumor was soft. The internal treatment was continued. Forty-eight hours after the operation the sponges had to be removed because of the offensive odor emanating from the discharge. This was done with little loss of blood. On the evening of the third day, the condition of the patient became much worse; his extremities were cold, his face was pinched and covered with a cold perspiration; pulse 130 and feeble; consciousness still present, and pain not complained of. Seventy-six hours after the operation the patient died.

The report of the *autopsy* by Dr. F. Kebler, embraced the following: The body was emaciated; rigor mortis pronounced. A bloody fluid containing gray friable masses of tissue, giving a greasy feel when crushed between the fingers, flowed from the wound in the hypochondriac region. On section, the diaphragm was found to extend as high as the third intercostal space. The liver appeared to contain an enormous tumor, and extended across the entire width of the abdomen. When about to remove it, there was found attached to it and extending from the under surface of its right lobe, a cystic tumor, reaching as low as the umbilicus. The tumor was about twice the size of an adult head. The capsule had become so intimately blended with Glisson's capsule as to leave no groove to indicate where liver ended and tumor began. Careful examination, however, showed the margin of the liver about one-half inch below the border of the ribs. The tumor was covered over by peritoneum reflected from the right side of the spinal column in the region of the right kidney. The lower part of the tumor was solid and nodular, of a grayish color, rather soft, and containing in various parts extravasated blood. Above and overhanging the solid part was the cystic portion. The surface of this was smooth. The internal surface was rough and uneven, due to the presence of red and gray friable matter like that which presented at the external wound. In places the cyst-wall was very thin. The edges of the incision through the abdominal wall were united to those of the corresponding incision in the tumor by young, easily broken-down inflammatory adhesions, which completely encircled the incision. The peritoneum presented no evidence of inflammation except that just referred to. The under surface of the right lobe of the liver was infiltrated by the tumor to the depth of about one-third or one-fourth of an inch. The abdominal organs were anæmic, with the exception of the right kidney, which was enlarged and hyperæmic.

Microscopic examination of the tumor revealed that it was a mixed-celled sarcoma, consisting of small and large round- and spindle-cells, imbedded in a clear, homogeneous basis substance, in which were found bloodvessels with thin walls, and here and there extravasated blood. The contents of the cysts consisted of red and white blood-cells, a large amount of granular detritus. and large, free, granular, nucleated cells. In the opinion of the pathologist, the tumor sprang from the region above the right kidney, then extending upward, attached itself to the liver, infiltrated its substance, and, finally, by its weight, pulled upon the right lobe in such a way as to cause its border to become exceedingly thin.

The speaker said, further, that in the consideration and unbiassed appreciation of this case, a number of leading features should be taken into account, viz., a positive diagnosis was not made prior to making the incision; this incision was intended to be exploratory. After the incision, the surface of the tumor resembled so closely hepatic tissue that no one doubted its identity. Even at the autopsy the same tissue was at first mistaken for liver, and it was only microscopic examination that revealed the fact that the incision had been made through the cystic wall of an enormous neoplasm. The liver appeared as an enormous viscus, filling almost the entire abdominal cavity, and no suspicion of a tumor arose until the pathologist, with a view of removing the liver, raised its lower margin, when the neoplasm attached to its under surface was discovered. Springing from the loose connective tissue, or from a lymphatic gland behind the peritoneum and above the kidney, this new growth encroached upon the right hepatic lobe, displacing the entire viscus to the left and at the same time tilting it upon its transverse axis in such a manner that its upper surface was directed forward.

The post-mortem examination, he said, revealed to his entire satisfaction the applicability of the *technique* of the operation practised, to cases of hepatic abscess, cysts of the liver or pancreas, and even of the kidney. Not a sign of peritonitis was present, and no blood was found in the peritoneal cavity. The margins of the abdominal wound were everywhere adherent to those of the cyst-wall, and none of the cystic contents escaped into the peritoneal cavity. While in this case the operative procedures hastened death, the result cannot be attributed to the character and *technique* of the operation.

In this case, the diagnosis of retro-peritoneal sarcoma, although considered, was excluded because, first, this disease, unconnected with the kidney or supra-renal capsule, is exceedingly rare. Of eight hundred and ninety-four sarcomata tabulated by Gurlt (Langenbeck's *Arch.*, 25, 436), only one sprang from the retro-peritoneal connective tissue. Prior to Lobstein's investigations, nothing was known concerning them. To this investigator and to Virchow we are indebted for most of our knowledge on the subject. These tumors are mostly solid, and the reporter had been able to find in literature but one retro-peritoneal sarcoma that had undergone cystic degeneration. In this case, which was successfully operated upon by Czerny (Langenbeck's *Arch.*, 25, 869), the tumor occupied the central portion of the abdomen, and over its free margin the liver could be distinctly felt. Aspiration was also practised, and unmistakable evidences found of a sarcoma undergoing myxomatous degeneration. Upon this the diagnosis was based. Again, in this case the growth did not follow the lines of growth common to those of the kidney, as sarcomata springing from this neighborhood usually do. Growing forwards and downwards, they displace, as Simon has shown, the colon to the median line. They are fixed to, and unaffected by movements of the diaphragm. Both of these signs failed in this case.

Fortunately, the difficulties which surrounded the recognition of this case, the speaker said in conclusion, are not frequently encountered. That they do, however, present themselves at rare intervals is only a more cogent reason that individual cases, whatever their termination, should be published, in order that the profession may be profited by the accumulation of individual experience. In the discussion that ensued, the following remarks were made:

DR. J. T. WHITTAKER said that the point of especial interest to him had been the diagnosis. There seemed to have been no question in the minds of those who examined the case previously, or at the time of operation, that the tumor was situated in the right lobe of the liver. As already stated, the diagnosis was narrowed down to two things—echinococcus and cystosarcoma. The symptoms rather favored the diagnosis of an echinococcus cyst. The tumor had existed two years without causing any pain until within a week or two preceding the operation. This slow growth, the absence of marked cachexia, of pain, or of hemorrhage from the bowels, and the presence of fluctuation, together with the location and appearance of the growth, all seemed to indicate an echinococcus tumor. He was not willing, he said, to accept the diagnosis of a cystic sarcoma of the liver without the recognition of a sarcomatous growth elsewhere. Two or three punctures had been made, as stated in the essay, and a fluid withdrawn, which, while it was by no means characteristic of a hydatid cyst, did not present features that would necessarily exclude it. The fluid obtained was turbid, sanguineous, contained flocculi, and gave the reactions indicative of albumen. It contained no hooklets. This, however, would not exclude the possibility of a hydatid tumor, for in the majority of cases they are not found. The presence of albumen was expected, inasmuch as blood was present. In view of these facts, the speaker believed that an exploratory incision was not only perfectly justifiable, but called for. But when the incision was made, the smooth, glistening surface, with the color and feel of liver-tissue, made the diagnosis as uncertain as before.

The nature of the tumor could not be made out until it had been entirely removed from the body. Perhaps, if the microscopic examination had been carried a little further, something characteristic of a sarcomatous growth might have been found. The pathologists could not make a diagnosis until the tumor was removed, and it is no wonder the physician and surgeon should not entirely succeed.

The speaker believed this to be a case in which a diagnosis *intra vitam* was impossible, and he felt that every step had been taken in the interest of the patient. The symptoms had been summed up, repeated aspirations had been made, the contents of the aspirator subjected to microscopic examination by several competent observers, and finally an exploratory incision had been made. But the case was surrounded with such inherent difficulties that even upon the post-mortem table, after laying open the abdominal wall, the character of the growth, or even its exact situation, could not be determined.

Another interesting subject, he said, was the etiology of sarcomatous neoplasms. The development of tumors in regions like this, where no injury could be received, he thought, added strength to the theory of Cohnheim, that such growths spring from islands of embryonic tissue remaining undeveloped after the maturity of the organs and tissues for the formation of which they were intended. The experiments of Zahn lend support to this view. This observer found that, while mature tissues, cartilage, bone, etc., could not be transplanted, immature tissues, periosteum, deep layers of epithelium, could be made to grow when transplanted. Leopold has since transplanted, in this way, not only parts, but whole fœtal tissues and organs, as the whole heart. In one instance, where he had inserted bone tissue into the aqueous humor, growth occurred to such extent as to destroy the whole eye. It is at least pleasing to have a theory or a rational hypothesis in illumination of a subject so obscure.

Dr. Forchheimer stated that he must correct the author of the paper in his statement that he had pronounced the cells, seen in the fluid sent him for microscopic examination, liver cells. He was always opposed to positive statements, with regard to the character of isolated cells. The fluid sent him was a turbid sanguineous fluid containing flocculi and shreds of tissue. Under the microscope he found numerous red blood-corpuscles, quite a number of leucocytes, cholesterine crystals, and numerous cells in an advanced stage of fatty degeneration. In regard to the pathologist's report, he said that this tumor must have differed greatly from the sarcomata usually found originating in the retro-peritoneal glands, inasmuch, as it was a mixed sarcoma containing both round- and spindle-cells. As a rule, he said, and almost without exception, these tumors were made up of large round cells and giant cells, growing rapidly, but he had never seen one containing spindle-cells.

Dr. Ransohoff, in conclusion, expressed regret that more had not been said with reference to the diagnosis of cases like the one reported. He thought the case reported differed widely enough from the recorded cases of cystic sarcoma in this situation to be of interest. They usually develop with great rapidity, proving fatal in a short time. In a case which he had seen with Dr. Bramble, the patient suffered lancinating pains in the lower extremities, and had previously been treated for rheumatism and neuralgia. A fluctuating tumor twice as large as a fœtal head was found, which proved, upon autopsy, two months later, to be a round-celled sarcoma. The entire duration of that case was only four months. With regard to the microscopic diagnosis of such tumors, he said more attention ought to be paid to such examinations. But in the case reported he had himself examined the fluid, and could confirm the statement that it contained nothing characteristic except shreds of tissue undergoing fatty degeneration. Could a portion of the solid tumor have been removed, a diagnosis would doubtless have been made. Where portions of a tumor can in this way be removed and examined, the speaker considers the use of the microscope invaluable. An inaccuracy of diagnosis, he said, had been committed in considering the tumor as situated in the liver instead of behind it, and involving it only secondarily.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, November 15, 1883.

The President, Fordyce Barker, M.D., LL.D., in the Chair.

After the reading of the minutes, Dr. F. V. White, the Statistical Secretary, announced

THE DEATH OF DR. J. MARION SIMS,

for many years an honored Fellow of the Academy.

The President, in speaking of this sad occurrence, said that by the death of Dr. Marion Sims the Academy of Medicine and the profession of New York, and, indeed, of the whole country, had lost its most brilliant and original genius in the department of surgical gynecology. If circumstances had forced him into other branches of surgery, his promptness and fertility in practical procedure, his intuitive power of conception of new means to secure any desired result, his endowment of invention, and his wonderful mechanical adroitness, would undoubtedly have secured for him equal eminence in any of its departments. No one, he thought, could be compared to him in his own special field except the late Sir James Y. Simpson, whom, indeed, he closely resembled in many respects. The resemblances of these two great men were much more numerous and striking than their points of contrast. To speak of the greatest achievements of each, the one had won for himself imperishable fame by his courage and ardent zeal, carried almost to rashness, in successfully introducing the use of anæsthetics for the relief of the agonies of parturition, and the other by devising new methods of physical exploration, and new surgical procedures. Both men were incessant, zealous workers, who for many years were constantly making contributions of positive worth to the store of knowledge of the profession. The former added more to scientific literature, and the latter more to the practice of his art.

In concluding, Dr. Barker announced that he would appoint Dr. Thomas Addis Emmet to read a memoir of Dr. Sims at the first meeting of the Academy in January.

DR. FRANCIS DELAFIELD then read a paper on

TYPHOID FEVER IN NEW YORK.

All the members were interested at present, he said, in the study of typhoid fever, as all had been engaged during the past year in treating a constantly increasing number of cases of the disease. It would, therefore, be of some service to collect such facts in regard to typhoid as it existed in New York, as were of practical import. Statistics, although dry, were sometimes wholesome and necessary. As physicians went about seeing and treating disease, the impressions which they gather are not always correct. The importance of certain symptoms, the efficiency of special methods of treatment, the relative number of cases and such like points were apt to assume too great prominence; but when we looked back afterwards over the whole field, we were enabled to correct our errors and obtain a much more accurate view of the subject engaging our attention.

The records of the Board of Health for a number of years showed that for several years preceding 1863 the yearly mortality from typhoid fever averaged from one hundred to two hundred cases. Between 1863 and 1866, when typhus fever prevailed in New York, the number of deaths from typhoid ran up to from five hundred to six hundred cases a year. Since then the deaths from it had ranged from two hundred to four hundred a year. In 1879 there were one hundred and seventy-eight deaths; in 1881, four hundred and forty-six deaths; and in 1883, up to October 1st, two hundred and seventy-four deaths.

In New York, as in most other places, typhoid fever was most prevalent at the end of summer and beginning of autumn, or during the months of August, September, and October. The number of cases was then the largest, but no month of the year was exempt from the disease. In the various hospitals in New York in which typhoid fever patients were admitted, there were treated, from January 1, 1878, to October 1, 1883, thirteen hundred and five cases. A review of these would, therefore, show the hospital experience with the disease during this period. In the different years included in it the percentage of mortality, as well as the number of cases treated, had varied, as shown in the following table:

Year.	Number of Cases.	Percentage of Deaths.
1878,	124	27
1879,	114	20
1880,	110	30
1881,	319	22
1882,	313	23
1883 (to October 1st),	190	26

From this it would seem that the highest rate of mortality occurred in 1880, and the lowest in 1879.

As to the age of the patients, an allowance was to be made for the fact that, as a rule, the population of the various hospitals was made up almost exclusively of adults. The figures were as follows:

Between the ages of 5 and 10 years, 49 cases.
" " 10 " 20 " 336 "
" " 20 " 30 " 604 "
" " 30 " 40 " 186 "
" " 40 " 50 " 77 "
" " 50 " 60 " 16 "
" " 60 " 70 " 2 "
Over the age of 70 years, . . 4 "

The ordinary rule in typhoid—of preferring young adults—was, therefore, observed, nearly one-half of the entire number of patients being between the ages of 20 and 30.

As regards that most important consideration, the etiology of the disease, Dr. Delafield remarked that he had very little to say. Many of the cases originated outside of the city, and of the origin of cases in New York it was difficult to speak with any certainty. Perhaps the investigations that were at present being made by the Board of Health might throw some light on the subject.

In the autopsies recorded, the regular intestinal lesions of typhoid fever were observed, the pathological changes, even in the worst cases, being confined to the agminated and solitary glands. In some epidemics the large infiltration of the walls of the intestines was wanting. Perforation of the intestine was noticed in only a small number of cases. In two of these the perforation was through the wall of the *appendix vermiformis*. The colon was involved in only a few instances. In only one case were the multiple new growths of lymphatic tissue, sometimes met with in the stomach in typhoid fever, seen. The mesenteric glands were found in a swollen condition in all the cases, the amount of the swelling varying with the gravity of the other lesions. Suppuration of the mesenteric glands, however, was seen in only two cases. The spleen was soft in all the cases. In some it was enlarged, in others of normal size, and in still others, even smaller than normal. In a single case (that of a boy eight years of age), rupture of the spleen occurred, with a large extravasation of blood into the peritoneal cavity. Suppuration of the parotid gland was not seen in any instance. The liver was found enlarged in many cases. The kidneys, also, often exhibited swelling, with degeneration of the epithelial cells. In such cases there was sometimes albumen in the urine during life, and sometimes not. The heart was firm, and with normal muscular structure, in the majority of cases. The lungs exhibited a variety of changes, though the evidences of severe bronchitis and bronchopneumonia were seen in only a few cases. Lobar pneumonia existed in two cases. Hypostatic congestion of the posterior portions of the lungs was very common; but extreme hypostatic congestion was not frequent. The voluntary muscles of the abdomen exhibited the characteristic granular and waxy degenerations in very few cases. There were no lesions in the brain. It was evident, therefore, that the anatomical type of the disease had not been a severe one, neither the characteristic and ordinary, nor the accessory lesions being more than fairly marked.

In studying the symptoms that had characterized typhoid fever of late in New York, Dr. Delafield had collected the data of one hundred and two cases, occurring during the last five years. All were undoubted cases of the disease. A distinct prodromic period was recorded in only eighteen of the cases, and in all of these the symptoms were much the same. Sometimes bronchitis was among them. This period varied in duration from four days to several weeks.

The character of the invasion was ascertained in eighty-three cases. In thirty-seven of these a chill occurred on the first day. It was in some cases mild, and in others severe, and was sometimes repeated on successive days. It was followed by febrile movement, which was usually accompanied by headache, nosebleed, diarrhœa, and other symptoms. There were forty-four cases altogether in which diarrhœa was one of the first symptoms. In three there was blood in the passages from the beginning. In fifteen headache and fever were the first symptoms; and in six bronchitis was the most prominent trouble during the first week. Pain in the right iliac fossa or over the abdomen was noted in a number of cases at an early period, but it was often difficult to ascertain with certainty whether this symptom was present or not. In some of the cases it could not be ascertained just how or when the disease commenced.

In regard to the temperature during the first week, this was the period in which the record was most incomplete. In the cases where it was noted during the first week it did not rise in the regular way, which was characteristic of the schematic curve of typhoid fever, but was more or less irregular in its variations. It had been repeatedly noticed that the transfer of the patient to the hospital often produced a temporary increase in the temperature, so that this was sometimes higher on the day following admission than at any other time during the course of the fever. In some cases there was a sudden fall of the temperature during the first week, lasting six, twelve, or twenty-four hours. In others there were morning chills, followed by afternoon fever, and this by sweating; the whole being repeated several times.

In the second week, the temperature approached more nearly that of a regular continued fever. In some cases there was a decided remission in the morning (sometimes the thermometer indicating only 99°); and in others the morning temperature was higher than the evening. In some cases convalescence was established after the fifteenth day. In others there was a temporary remission in the fever at this period, and then the disease would go on for several weeks without abatement. In fatal cases the temperature was sometimes highest a day or two before the termination of life.

In the third week the course of the temperature was much the same as in the second; while in the fourth week there was usually a more decided fall in the morning. In some cases, the temperature after falling for two or three days in succession, would rise again and continue high for one or two weeks longer. As a rule, the temperature varied according to the severity of the disease; but there were many exceptions to this. There were mild cases in which the temperature was from 103° to 105°, and severe cases in which it was from 100° to 103°. The effect of a high temperature upon the patient's sufferings varied very greatly in different instances, some bearing it with apparently very little discomfort. The pulse varied at first from 80 to 120. In the third week it was apt to be more rapid, and was sometimes dicrotic. It was sometimes both full and slow. Generally a very rapid pulse was an unfavorable sign, but this was not invariably the case. In the patients who died with low temperature, the pulse was usually rapid and full. The appearance of the facies was usually characteristic of the disease. The tongue, as a rule, was coated down the centre with a thick white fur, and afterwards became brown and dry; or it remained clean from the first, but became dry and fissured. The moistening of the tongue was generally one of the first signs of the breaking up of the fever. Delirium was well marked in forty-one cases, and was worse during the night than in the daytime. It was sometimes very severe, and cases are on record in which it was so violent that it was mistaken for acute mania, and the patient was sent to an insane asylum instead of a hospital.

Diarrhœa existed in eighty-one cases. In forty-four it commenced at the outset, and in fifty-one continued throughout its course. Constipation of a well-marked character was noted in eighteen cases, and it was apt to be associated with excessive tympanites. The characteristic eruption of typhoid fever was noted in forty-four cases, but Dr. Delafield thought it was probably present in a larger number than this, but had been overlooked. During the present autumn he had noticed that the eruption was considerably more common than had usually been the case in New York for the last few years.

He next spoke of the complications met with. Hemorrhage from the bowels was noted in twenty-three of the one hundred and two cases. In six of these the hemorrhage seemed to be the immediate cause of death. The characteristic hemorrhage of typhoid fever, resulting from ulceration of the intestines, was most frequently met with in the second week of the disease. In three cases at the very onset of the attack there were diarrhœal passages mixed and streaked with blood; but here, of course, the hemorrhage could not have been the result of ulceration. In one case the intestinal hemorrhage was accompanied with bleeding from the gums and other parts of the body, and was, therefore, apparently due to a general hemorrhagic tendency. In two cases there was a constant bloody discharge from the bowels, like that which occurred in cancer of the rectum, and in both instances it occurred late in the disease (the sixth week.) In those cases in which the characteristic hemorrhage of typhoid was noted there was usually a well-marked fall of temperature within a few hours after its occurrence. There were, however, many exceptions to this. As had been remarked, the hemorrhage proved directly fatal in six cases, and it was always an alarming symptom. Of the twenty-three cases in which it was noted, only nine finally recovered.

In three cases a well-marked pustular eruption broke out all over the body, the pustules often amounting to small abscesses, and in five cases there was suppurative inflammation of the middle ear. There was severe pharyngitis with false membranes over the pharynx and tonsils in one case (during the first week), and a moderate degree of catarrhal pharyngitis was met with in a large number of cases.

Bronchitis of severe type or broncho-pneumonia occurred in twenty-four cases. In some of them the symptoms connected with the bronchitis were more severe than those of the fever, and in some the bronchitis was the immediate cause of death. Slighter forms of bronchitis were very common. Lobar pneumonia was seen in two cases, and in both it was apparently the cause of death. Enfeebled heart-action was frequently noted, and in one case several attacks of syncope occurred.

Peritonitis was noted in only four of the cases. In two it was caused by perforation of the small intestines by ulceration, in one by perforation of the *appendix vermiformis*, and in one was due to inflammation of the mesentery. All four of the cases proved fatal. Dysentery was noted in five cases, four of which recovered after lasting a number of days. In the other the patient died.

Of the cases which recovered (exclusive of those in which relapses occurred), the duration of the disease was ascertained in sixty-one cases. Of these, one recovered in sixteen days, four in eighteen days, six at the end of the third week, nineteen at the end of the fourth week, twelve at the end of the fifth week, four at the end of the sixth week, four at the end of the seventh week, one at the end of the eighth week, nine at the end of the ninth week, and one at the end of the tenth week The largest number of recoveries occurred, therefore, at the end of the fourth and fifth weeks. In cases which lasted longer than the fifth week there were often periods when the temperature fell and, after remaining reduced for a time, went up again.

Well-marked relapses were observed in only seven cases; all of which recovered. In three of these the interval of convalescence commenced in the fourth week and lasted from five to fourteen days. In three cases it occurred in the sixth week and lasted from five to thirteen days, and in one case in the tenth week, lasting five days.

Of one hundred and two cases, thirty-four proved fatal. In fifteen death seemed to be directly due to the disease itself. In most of them the temperature ran high, ranging from 104° to 107°. The high fever was not continuous, however, and did not extend up to the time of death. The pulse was feeble, and usually rapid. Six patients died of hemorrhage, one of syncope, on the twenty-eighth day, four of peritonitis, three of bronchitis or broncho-pneumonia, two of lobar pneumonia, one of rupture of the spleen, and one of dysentery occurring during convalescence. In one case death occurred from collapse (the temperature falling to 95° in the rectum), after a very thorough sponging with ice water and lumps of ice. In eighteen cases, therefore, death was due to complicating conditions.

In regard to the treatment, Dr. Delafield had endeavored to gather the prevailing ideas at the various hospitals. In mild cases, as a rule, the patient was simply put to bed and placed on a milk diet, and no further treatment was attempted. In some hospitals peptonized milk was preferred. Alcohol in some shape was given by some physicians in all cases without exception. By others this agent was reserved for cases with feeble heart-action. Besides alcohol, digitalis, convallaria, and caffein were employed as heart tonics. In some hospitals quinine was given in nearly every case. In others it was resorted to only when the temperature rose as high as 103°, and in still others it was scarcely used at all.

General bathing seemed to have been almost abandoned in New York during the past year, although before that it had been used to a large extent. Sponging the whole surface of the body with water, or with water and alcohol combined, the Kibbe fever-cot, and the cold pack were still used to some extent in some hospitals; but in others the use of cold water in any shape as a means of reducing temperature had been entirely abandoned.

For tympanites, turpentine given internally and applied locally, continued to be the standard treatment. For intestinal hemorrhage, opium and ergot were used. For sleeplessness and restlessness, opium was used with considerable freedom. When diarrhœa was troublesome, opium either alone or combined with bismuth and pepsin, was given, and in some hospitals a solution of acetate of aluminia was resorted to. In one institution large doses of calomel were given if the disease was seen in its early stages, with the idea of aborting it. Salicylate and benzoate of soda, tincture of iodine and carbolic acid combined, and similar agents were occasionally tried with the idea of counteracting the typhoid poison, but, as a rule, were but very little used.

The President thought that all would be astonished to find how many cases of typhoid there had been in the city during the last few years. Dr. Delafield's paper seemed to him to be the most exhaustive analytical paper on this disease since those of Murchison, and he would simply touch upon a few points which had struck him during the reading of it, and which might afford profitable topics for discussion. In the *first* place, the rate of mortality seemed to be quite high, as compared with that of the disease in other places and periods. Thus, during twelve years, according to Murchison, the average mortality from typhoid in the hospitals of London was twelve per cent. *Second.* The small proportion of cases in which there was a prodromic period. This was probably due to the fact, however, that in hospital patients it was often difficult to obtain satisfactory information on such a point as this. *Third.* The fact that the degree of temperature was not by any means always a measure of the severity of the disease. This point had attracted his attention for several years past. *Fourth.* The larger proportion of cases in which diarrhœa appeared as a symptom during the first week. *Fifth.* The percentage of deaths from hemorrhage, which corresponded with his own experience.

Dr. A. L. Loomis said that he had been anxious to know what definition Dr. Delafield would give of typhoid fever. He had given a very careful retrospect of this disease as it had appeared in our hospitals during the last few years. He had not, however, in this carefully prepared record of the characteristic symptoms of typhoid fever as seen in New York, described the typical symptoms of typhoid fever as we had been led to suppose that it existed in other countries. The description of Liebermeister, for instance, as given in Ziemssen's *Cyclopedia*, would not tally with that of Dr. Delafield. The question came back to us, therefore, What is typhoid fever? Was it a specific fever, originating from a specific cause, characterized by specific symptoms, and marked by specific pathological lesions? Among the chief characteristic symptoms attributed to it might be mentioned a typical range of temperature, as follows: A gradual rise during the first week; stationary temperature during the second week; remittent during the third week; and intermittent during the fourth week. Such a range as this, however, had not been described in the paper of the evening, nor had he seen it in any of the cases of typhoid which he had met with in New York.

The second characteristic symptom described in the books was the eruption, appearing on the seventh or eighth day, each spot lasting for three days, and one crop following another in regular succession for two weeks. Here, however, the eruption was seen in hardly half the cases, and in his own cases it had been the exception. When it was present, it appeared late, and was not often the characteristic rose-colored eruption, while the spots might last for three days, or six days, or indefinitely. The third supposed characteristic symptom was diarrhœa of a "pea-soup" character. But diarrhœa was frequently absent, and that described by Dr. Delafield (and usually met with in typhoid fever here) had nothing characteristic about it.

Dr. Delafield had avoided one very difficult point, and that was the etiology of the disease. Now was this fever prevailing in New York of spontaneous origin, or did it depend on a specific germ, which had to be developed and undergo certain changes before it became infectious? In other words, could we have typhoid fever without a typhoid germ? Of course, this was a very difficult matter to investigate. Dr. Loomis then read a *résumé* of the cases of typhoid which had been under his care at Bellevue Hospital since the last week in September. They were seventeen in number, and of these, four had proved fatal. In three of these, however, the patients died within three days after admission. The highest range of temperature was 105⅖°, and the average range was 101¼°. The eruption appeared in four cases, and diarrhœa in four. Constipation was present throughout in thirteen cases. Hemorrhage occurred in two cases, and peritonitis in two. In each of the latter there were ulcerations involving the large as well as the small intestine. In one case, there was complicating dysentery during convalescence.

From the characteristics of typhoid as seen here, therefore, he thought it was necessary either to regard the disease simply as a continued fever, with typhoid symptoms, or else to give up all idea of there being such an affection as typhoid fever. In New York, at least, there was no longer such a thing as a specific typhoid fever, or else the majority of the cases described by Dr. Delafield were not true typhoid. The so-called typhoid fever seen here did not correspond to the European type, or to that which used to be seen in New

England, although he believed there were some localities where typhoid was endemic. Not long since he had seen in consultation a Connecticut physician, and had inquired of him if he saw much old-fashioned typhoid in his practice now; to which he replied, that the disease was not like what it used to be before malarial fever was prevalent in the community. This, he believed, was the general experience of the profession at the present day, typical cases of typhoid being no longer met with.

Dr. Frank P. Kinnicutt, in referring to the constipation met with in typhoid, remarked that several years ago Sir William Jenner had called attention to the fact that a single deep ulceration of Peyer's patches might cause a paralysis of the bowels. Of course, however, there were other causes of constipation also. With reference to ascertaining the frequency of constipation, he had examined the records of all the cases of typhoid fever treated in St. Luke's Hospital in the summer and autumn months of 1882 and '83. In 1882 there were twenty-six cases, with seventeen recoveries and nine deaths; and in 1883 there had been eighteen cases, with fourteen recoveries and four deaths. Of the cases occurring during the present year, constipation had existed in seven, and diarrhœa in nine. Constipation was always a disadvantage to the patient, and was oftentimes of dangerous import. It was therefore necessary to adopt measures to relieve it, and as he did not think it right to give laxatives by the mouth, he was in the habit of using small enemata of thin gruel, frequently repeated if necessary. This answered perfectly, and was a better plan, he thought, than to give larger enemata at longer intervals.

In regard to relapses, he said he was convinced that these were wholly independent of any error of diet, and were unavoidable, as there seemed to be a distinct form of relapsing typhoid, in which a portion of the poison seemed to remain latent for a time, as pointed out by Da Costa. In the treatment, the question of the advantage of alcohol was a very difficult one to decide. The symptoms were the best guide, and his own rule was to withhold it until the third week, and then only give it when absolutely necessary. While alcohol might do good in some cases with delirium, he had seen two instances in which marked delirium and tremor had been wonderfully relieved by the withdrawal of alcohol, which had previously been given freely. In general, simple rest was the best treatment, medical treatment being reserved for special symptoms.

Dr. Edward G. Janeway believed it a mistake to consider typhoid fever more prevalent of late years in New York than it had been formerly. The statistics of the Board of Health showed that neither absolutely, nor certainly in proportion to the population, were there more cases of typhoid now than before. He differed from Dr. Loomis, and believed that the typhoid fever seen in New York was identical with that described as existing in Europe, because the lesions were the same. If there were discrepancies, their cause was to be looked for in other directions, and one great cause of discrepancy, he thought, would be found in the treatment adopted here. Quinine was almost universally given, and many physicians were in the habit of prescribing it in large doses in the beginning of typhoid in order to make a differential diagnosis between it and malarial fever. Both Liebermeister and Murchison admitted that there were atypical cases, such as were frequently met with here. The etiology of the disease was often very difficult to trace, but his experience, especially in epidemics occurring at the Roman Catholic Half-orphan Asylum, the Deaf and Dumb Asylum, and Princeton College, had convinced him that the disease was of specific origin. In these different epidemics the symptoms varied very greatly, but the lesions were always the same. At the Deaf and Dumb Asylum diarrhœa was the rule, while it was the exception at the Half-orphan Asylum. In one case at the former institution he met with the highest temperature which he ever saw reached without a fatal result, viz., 109°. It was attendant upon the development of pneumonia, and lasted only for a very short time. Typhoid he believed to be a disease which was due to poison capable of producing a fever which might last from three days to eight or ten weeks. In all outbreaks of the disease there were cases which lasted only a very short time. As regards certain features of typhoid as it was now found in New York, he had found, like Dr. Delafield, that the eruption was particularly well marked, and he had not seen a case of the disease in an adult which had reached the tenth day in which it could not be detected if careful search was made for it over the abdomen, breast, and back. He had never seen any special difference between city and country cases of typhoid, and thought that the disease as seen in New York was very much like that met with in other places. It was always of interest to try to trace the origin of an outbreak of typhoid, but that it was a very difficult matter was well illustrated in a case which had recently come under his notice. This was that of a pedler who, for a week after typhoid had set in, although suffering from severe diarrhœa, had continued to ply his vocation among the tenement-houses of the city, and it was estimated that it was possible for him to have infected the closets of no less than forty-eight houses during this time. As a rule, it was very unsatisfactory to attempt to trace the disease to milk supply in this city; but in the case of the epidemic at Fort Washington last year, such an origin seemed to be well established. In the outbreak at Princeton, the first six cases occurred in April, and it was found that all the six students had been taking their meals at one house. On investigation it proved that there was a cesspool within forty feet of the well from which the drinking water of this house was drawn. Later on, the disease was spread through the drain-pipes and in other ways.

Dr. T. A. McBride spoke of the cases which he was accustomed to see at the out-door department of the New York Hospital. There were ordinarily diarrhœa and elevated temperature, and on examination he found an enlarged spleen and often an enlarged liver. The spots were almost always present. Some of these cases were sent to the hospital, but many of them did not remain there more than one or two weeks. He had recently had a case of typhoid in which a number of hemorrhages had occurred, and he would like to ask Dr. Delafield how long albumen, unassociated with tube-casts, appeared in the urine after such hemorrhages.

In the treatment he was in the habit of using kairin. In one case he had been unable to employ quinine in any form; and trying the kairin, he had found it to act very satisfactorily. He sometimes used from fifty to sixty grains of it in the twenty-four hours. When the temperature rose to 103°, or higher, his rule was to give seven grains of kairin every hour until it was reduced to 101°. If the temperature was not higher than 102°, he used only three and a half grains every hour until it fell to 101°. Invariably he had found that seven grains reduced the temperature from three-fourths to one degree, and it was seldom necessary to give more than two doses in successive hours. It almost always caused a copious perspiration; and the reason that he made 101° the limit was, that if the temperature was brought lower than this the patient would be apt to have a chill, when the fever would run up again very rapidly. The drug was given in capsules or pills, after milk or other food had been taken; and he had never seen it produce any unpleasant effect upon the stomach. After kairin had been taken, the urine assumed a greenish hue, and was usually found to contain albumen.

The President, after brief remarks by Drs. Pinckney and Fruitnight, said that it was his practice never to disturb the bowels when there was constipation until the patient began to suffer from inconvenience from it, and he then gave a single powder of five grains of calomel worked up with fifteen or twenty grains of bicarbonate of soda, which he found of great service.

Dr. Delafield, in closing the discussion, said that there was much atypical typhoid in New York. The fact that the disease did not always have typical symptoms was known to all, and this was the very reason why he thought it would be of service to bring these cases together. But, after all, typhoid fever was very much the same as other diseases in the respect that it varied very greatly at different times and in different localities. The lesions were the characteristic feature of the disease, and yet, while they were the same in kind, they differed greatly in degree. He was very familiar with Liebermeister's article on typhoid, as he had translated it for the American edition of Ziemssen, and he thought it was undoubtedly true that he had misled many persons. When he was translating the article, he was struck with the fact that it was unquestionably made up, the author's descriptions being more definite and precise than if they had been taken directly from nature. In short, he had sacrificed truth in order to present a clear and striking picture of the disease. Constipation, he thought, had nothing to do with ulceration of the small intestines, and he doubted whether the diarrhœa depended on the intestinal lesions. The constipation, in all the cases in which he had mentioned it, had been of a positive character, and this he considered a decided evil to the patient, so that he never hesitated to give laxatives during the first week if they were required; after that, enemata were better. He agreed with Dr. Kinnicutt in regard to relapses being independent of incidental circumstances, and with Dr. Janeway as to the frequency of the occurrence of the eruption during the present season. In answer to Dr. McBride's question as to albuminuria after hemorrhage, he said that he had had no experience in the matter, although the kidneys, as he had shown, were exceedingly apt to be affected in typhoid.

THE AMERICAN PUBLIC HEALTH ASSOCIATION.

Eleventh Annual Meeting, held at Detroit, November, 13, 14, and 15, 1883.

(Specially reported for The Medical News.)

The Eleventh Annual Session of this Association convened in the city of Detroit, Mich., Tuesday, November 13th. The place of meeting this year had been held to have about equally balanced advantages and disadvantages as to attendance and increase of membership; the advantage being chiefly in the fact that Michigan is perhaps the best enlightened State in the Union sanitarily, thanks to the work of its State Board of Health, while the fact that transportation facilities to points like Detroit, reached mainly by pool lines, are not afforded, constitutes the chief disadvantage. This view proved correct, and the attendance was about the average of recent meetings.

The experience of the last few years has pretty definitely shown that the southern and southwestern cities are by far the most favorable places for meetings of the Association, those communities being keenly alive to the money as well as the physical value of health.

The arrangements for the meeting at Detroit, having been in charge of an able local committee, of which Dr. Wm. Brodie was Chairman, were very satisfactory, save in the one important particular that Merrill Hall, the place of meeting, can, beyond doubt, establish a claim to having as bad acoustic properties as any hall in the land.

Tuesday, November 13th, First Day.

Morning Session.

The Association was called to order by the President, Ezra M. Hunt, M.D., of Trenton, N. J. After the opening business of the morning, including the Treasurer's Report, which showed a handsome balance on hand, the call for reports of committees brought forward that of the special committee on

CATTLE DISEASE,

by Dr. J. M. Partridge, of Indiana, Chairman, which was brief and unimportant, except as it served as the introduction for several very able papers which followed, upon the subject of cattle disease. Additional interest existed in this one of the four main topics assigned for special consideration at this meeting, from the fact that the Cattle Disease Convention was about to open at Chicago, and that the veterinarian experts of the two rival cattle-disease authorities of the United States, Prof. D. E. Salmon, of the Agricultural Bureau, and Prof. Law, of the Treasury Cattle Commission, were both present.

The first paper of the session was by the former of these gentlemen, Dr. Salmon, of Washington, its title being

TEXAS CATTLE FEVER: IS IT A CHIMERA OR A REALITY?

The paper was strong in its construction, clear and logical in its deductions from the data it gave, and will form a valuable contribution to the constantly lengthening chain of evidence which goes to establish the positions taken by Prof. Salmon: that Texas fever *is* a reality; that its origin is confined to a certain belt of territory; that its seeds are portable; and that the danger of its wide extension, except it be carefully and strongly controlled, are great.

There will be, perhaps, many who will join in the dissent expressed by Dr. O. W. Wright, of Michigan, to the postulate of Dr. Salmon: that it must require a disease in an animal (though it might be undeveloped) to produce the disease in other herds.

The discussion of the paper was short, and not important, being briefly participated in by Dr. J. H. Rauch, of Illinois; Dr. Hilary Ryan, of Texas; Dr. Wright, of Michigan; and Prof. Law.

The second paper of the morning, its title being *Swine Plague*, by Dr. J. M. Partridge, of Indiana, was an interesting statement and analysis of the features of this disease, well condensed, but containing nothing specially new. There was no direct discussion of the paper.

The third paper, by Dr. W. T. Belfield, of Chicago, which was in the form of a report by this gentleman to Dr. O. C. DeWolf, Health Commissioner of that city, was forwarded to the Association by the latter at so late a time that it was not included in the programme of the day, and was read by the Secretary. It was entitled.

SWELL HEAD IN CATTLE.

The true character of this disease, which has recently been very prevalent in the Chicago stock-yards and elsewhere, has been only of late determined, though its prominent features, viz., tumors of varying degrees of hardness upon the jaws, etc., have long been dealt with by veterinarians, and associated with the lodgment of foreign substances in the jaws, etc. The fungous character of its etiology, the *actinomyces* and their growth, the establishment of the disease as *actinomycosis*, and its relative features in animals and man, were clearly portrayed. It was considered one of the best contributions of the session.

Prof. Law, in the brief discussion which followed, was not ready to admit that the recognition of the actinomycocic character of the disease was of so recent a date as claimed.

The Association took a recess till 3 P. M.

AFTERNOON SESSION.

The subject of malaria, as one of the four principal topics, was assigned to this session, and its consideration was opened by a very long, able, and exhaustive review of

THE ETIOLOGY OF MALARIA,

in a paper by Surgeon GEORGE M. STERNBERG, U. S. Army. This was followed by another on "The Etiological Association of Organic Matter with Malaria," by Surgeon ALFRED A. WOODHULL, U. S. Army, equally careful and elaborate in analysis, and a third paper by Surgeon CHARLES SMART, U. S. Army, on

THE PREVENTION OF MALARIAL DISEASES,

as clear and able in its scope as its predecessors, completed a trio of remarkable papers on the general subject, all by distinguished officers of the medical staff of the army; prepared without coöperation or mutual understanding, from different standpoints, and mainly from different data. That nothing which could be said to be absolutely new to science was presented in these papers is true, but as complete statements of what has been determined in regard to malaria, as setting the stakes of recorded observations, and as showing the routes along which inquiry for the future must be directed, they will stand quite unexcelled if not unrivalled, and in them the medical staff of the army certainly gathered new laurels. The agencies of heat, moisture, and vegetable decomposition received full and elaborate consideration in the several papers, and the low-resistance powers of the system were given credit for the part played by them. Dr. Sternberg expressed himself as hopeful as to the complete solution of the cause of malaria in the not remote future. The data showing the increased percentages of malaria in relation to latitudes was most effectively and logically used. Dr. Woodhull reviewed the etiological power of subsoil and stagnant waters with some detail, and placed some stress upon the probable responsibility of drinking-waters in causing the disease. Dr. Smart coincided with more emphasis in the latter view, and gave some facts in support of the theory. He advised filtration of suspected waters.

EVENING SESSION.

The evening session was devoted to addresses of courtesy, His Excellency, GOVERNOR BEGOLE, of Michigan, welcoming the Association in a remarkably fitting and graceful address, in which he remarked in effect, that so significant and gratifying was the sight of doctors endeavoring to prevent disease, by ministering to which they had their living, that he now only looked forward to a convention of lawyers, intent on preventing litigation, to be prepared to say, like Simeon of old, "Lord, now lettest thou thy servant depart in peace."

DR. WM. BRODIE, of Detroit, was introduced in behalf of that city in the absence of His Honor Mayor Thompson, and made a characteristic speech of welcome. Dr. John Avery, President of the State Board of Health, followed with an address of welcome on the part of the sanitarians of the State, which was graceful and strong.

The President of the Association, DR. EZRA M. HUNT, of Trenton, N. J., then delivered

THE PRESIDENT'S ANNUAL ADDRESS,

which opened with a brief reference to the birth and early work of the Association, followed out graphically the lines of sanitary thought running through the years since its organization, and considered at length the needs and reforms in the sanitary world. The illiberal action of Congress in vital sanitary matters was aptly characterized, and the address, which was replete with historical reference, strong statements of scientific truth, and the analysis of the character of sanitary work, was conceived and delivered in a high and elevating plane of thought.

At the close of the address, the Association adjourned till Wednesday morning.

Immediately upon adjournment, the members proceeded to the Russell House, by invitation of the Local Committee, where a citizens' reception had been arranged. An hour of social converse, followed by an elegant banquet, formed a pleasant feature of the meeting, and was a most enjoyable phase of the hospitality extended.

WEDNESDAY, NOVEMBER 14TH, SECOND DAY.

MORNING SESSION.

After the morning hour, the subject of malaria was resumed. DR. R. D. WEBB, of Alabama, presented a paper, which was read in his absence by Dr. English, of New Jersey, on

CHANGES OF TYPE IN MALARIAL FEVER

in Sumter County, Alabama, from 1833 to 1883.

As its title indicates, it was a synopsis of the clinical observation of fifty years in one locality, and as such was entitled to and received careful attention, and is one of those contributions to the volume of recorded facts from which in time careful analysis will deduce new knowledge.

The Secretary read a series of carefully formulated interrogations on malaria, put by Dr. J. W. Penn, of Tennessee, to answer which would be to settle all the questions involved in its study.

A paper on

THE CLINICAL THERMOMETER IN THE PREVENTION OF MALARIAL DISEASE,

by DR. THOMAS F. WOOD, Secretary of the State Board of Health, of North Carolina, was read by synopsis by the Secretary.

Dr. Wood holds, as the result of his observation, that there is special liability to attacks of malaria on the part of sailors upon vessels lying in the rivers and streams of his State, and that the use of the thermometer, as indicating by the temperature with great certainty the approach of the attack, gives the hint for prophylactic treatment. The evidence was well arranged and of weight.

COL. GEORGE E. WARING, Secretary of the National Board of Health, opened the discussion upon the papers on

MALARIA

by an allusion to the malarial condition prevailing at Washington, and his disbelief that the Potomac marshes causes it.

He was followed briefly by Dr. Gustavus Devron, of Louisiana, who believed that drying up swamp-water set free malarial germs; by Dr. O. W. Wright, Health Officer of Detroit, who thoroughly believed in perfect drainage as the preventive of malaria; by Dr. G. E. Ranny, of Michigan, who expressed his disbelief in the existence of typho-malarial fever and in the contagiousness of typhoid; by Drs. Wm. Oldright, of Ontario, and Trescott, of South Carolina; by Dr. George M. Sternberg, U. S. A., in remarks intended to supply an omission in his paper; by Dr. M. Formento, of Louisiana; Dr. E. L. Griffin, of Illinois; Prof. V. C. Vaughan, of Michigan, and Dr. P. H. Bryce, of Ontario, the latter of whom advocated the soil germ theory.

Dr. W. K. Newton, of Paterson, N. J., presented a paper on *Food Supply*, but did not complete it before the noon recess was taken.

Afternoon Session, Wednesday.

Dr. Newton, of New Jersey, continued the reading of his paper, which was a long and careful compilation of much that is known as to the adulteration of food, and a review of the sanitary and legal bearings of the processes and their results.

In the absence of one of the readers, Dr. Albert L. Gihon, Medical Director U. S. Navy, followed with a paper on

VITAL STATISTICS AS SANITARY MONITORS,

suggesting certain changes in the registration of statistics, so that better information should be had as to the prevalence of disease, instead of deaths, and of the causes attached.

The subject of the

ADULTERATION OF FOODS

was resumed by a paper on that subject by Prof. A. R. Leeds, of New Jersey, read by Prof. R. C. Kedzie, of Michigan.

The paper and its subject in general were discussed by Profs. V. C. Vaughan, R. C. Kedzie, and T. P. Wilson, of Michigan.

A synopsis of the paper on the *Yellow Fever Epidemic of 1884, in Pensacola, Fla.*, by Dr. R. B. S. Hargis, was read by Dr. Devine, of Louisiana.

A paper on

SCHOOL HYGIENE,

was presented by Dr. Chas. J. Lumly, of Detroit. The paper dealt pleasantly and well with several of the well-recognized forms of error in modern school hygiene, notably the over-length of time required for study per day, the want of ventilation and proper lighting, the too greatly exalted temperature, the enforced stooping posture at the desk, the myopic tendency, the want of physical training, the errors of cross-lights, etc.

Discussion upon the paper was opened by Dr. A. N. Bell, of New York city, special reference being made to the want of closet accommodations. Drs. U. K. Jones, of Massachusetts, J. F. Noyes, Prof. T. P. Wilson, of Michigan, and Dr. A. L. Gihon, U. S. N., participated briefly in the discussion; Drs. Jones, Noyes, and Wilson urging shorter hours, and Dr. Gihon condemning the attention demanded to mental arithmetic.

A recess was taken till 7.30 o'clock.

Evening Session.

The evening session, without being assigned to Physical Culture, opened with a paper of rare excellence by Prof. J. Madison Watson, of New Jersey, on

PHYSICAL TRAINING,

and this was followed by a masterly essay on *Physical Culture*, by Prof. D. A. Sargent, of Massachusetts. The burden of both papers was the necessity of laying broadly and well the bodily basis for the mental superstructure, and then of constantly caring for and strengthening it, as mental processes made larger drafts.

Both papers were considered of a very high type, and were ably supplemented by that of Dr. James E. Reeve, Secretary of the State Board of Health, of West Virginia, on *The Eminent Domain of Sanitary Science and the Usefulness of State Boards of Health in Guarding the Public Welfare.*

Dr. Reeve's paper was a scholarly and able inquiry into the relations of the people to the State, the close inter-relation of all parts of the community, and a clear exposition of the necessity of holding State and citizens to a greater responsibility for good health.

Thursday, November 15th, Third Day.
Morning Session.

The greater part of the morning session of Thursday, was devoted to business of the Association.

The Secretary reported from

THE EXECUTIVE COMMITTEE,

with favorable recommendation, several communications received from the Advisory Council. The first was a long preamble and resolutions reciting the importance of governmental stimulus to scientific investigation into the causes and prevention of disease, and in the name of the Association calling upon Congress to appropriate $25,000 for this purpose, to be expended under the direction of the National Board of Health. The second invoked the consideration of Congress in aid of the National Board. The third was a complimentary expression to Surgeon-General Philip S. Wales, of the Navy, for his interest in and aid of the cause of sanitary science by his efforts in behalf of the National Museum of Hygiene. The fourth was in the shape of preamble and resolutions in aid of the Army Medical Library and Museum, asking appropriations from Congress for both, and for the erection of a suitable building for their safe-keeping. With a few emendations all were adopted, as was the recommendation of the Advisory Council that St. Louis be the place of meeting next year.

Under the call for the reports of committees, Dr. Henry P. Wolcott, of Massachusetts, Chairman of the Standing Committee on

NATIONAL MUSEUM OF HYGIENE,

submitted the report of that committee, detailing the present very satisfactory condition of that institution, and the hope of the Surgeon-General of the Navy soon to avail himself of much larger accommodations, which will before long be required.

AN INVITATION.

Dr. Wm. Oldright, President of the Provincial Board of Health of Ontario, Canada, invited the members of the Association to attend the meeting of the Canadian Sanitary Association, to meet at London on Monday the 19th inst.

Dr. Samuel W. Abbott, Health Officer of Massachusetts, in behalf of the Committee on

COMPULSORY VACCINATION,

submitted a report from that committee. It combated the idea of any prevalence of transmission of disease by vaccine virus, and strongly upheld the practice of general vaccination.

ELECTION OF OFFICERS.

The nominations of the Advisory Council, acting as a nominating committee, were then reported, and by vote the Secretary was directed to cast one ballot for the several officers named, who were then declared elected, as follows:

President.—Dr. Albert L. Gihon, Medical Director, U. S. Navy.

First Vice-President.—Dr. James E. Reeve, Secretary of the State Board of Health, of West Virginia.

Second Vice-President.—Hon. Erastus Brooks, of New York.

Secretary.—Dr. Irving A. Watson, of Concord, N. H.

Treasurer.—Dr. J. Berrien Lindsley, of Nashville, Tenn.

Executive Committee.—Dr. Thomas L. Neal, Dayton, O.; Dr. J. D. Gatch, Lawrenceburg, Ind.; Dr. Henry P. Walcott, Cambridge, Mass.; Dr. Gustavus Devron, New Orleans, La.; Dr. Charles Smart, U. S. Army; Dr. Henry D. Fraser, Charleston, S. C.

A very elaborate paper accompanied by large diagrams, etc., on *The Removal of Decomposable Material from Households*, by Rudolph Hering, C. E., of New York City, was read by Prof. Kedzie, in the absence of the author. It was replete with valuable information for builders and householders, and will form a valuable contribution to the literature of sanitary construction.

Dr. William Oldright, of Ontario, Can., read a paper on *Overhead Ventilation of Sewers*. The paper contained practical suggestions for removing safely the sewer-gas from the old combined form of sewers, which the writer illustrated in part by model.

The Association here took a recess until 3 P. M.

Afternoon Session.

The following gentlemen were appointed as *delegates to the International Medical and Sanitary Congresses, at Copenhagen and the Hague, in 1884:* Prof. R. C. Kedzie, Michigan; Dr. O. W. Wight, Michigan; Dr. Stephen Smith, New York; Dr. Azel Ames, Jr., Massachusetts; Drs. W. K. Newton and E. M. Hunt, New Jersey; Dr. J. T. Linn, Indiana; and Geo. E. Waring, Washington, D. C.

A paper on

THE SANITARY CARE OF HOUSEHOLDS,

by Dr. Joseph H. Raymond, Health Commissioner of Brooklyn, N. Y., was read by Dr. A. N. Bell. The paper contained nothing new, and Col. Waring's criticism that the toleration it permitted of the pan-closet, even though occasionally burned off and varnished, was an error, was evidently approved by many. The subject-matter of the paper was discussed by Col. Waring; Dr. A. N. Bell, of New York; Col. D. P. Haddin, of Tennessee; Dr. Wm. Brodie, of Detroit; Dr. O. W. Wight, of Detroit; Dr. Gustavus Devron, of Louisiana; and the Secretary, Dr. Ames, of Massachusetts. The latter in reply to Col. Waring's advocacy of the separate system, and so the avoidance of sewer-gas in all places, showed the impossibility in many old cities having an expensive combined system and large indebtedness to build new systems; and contended that by proper effort freedom from harm even under such conditions was available.

A paper on *The Drainage of Level Lands, etc.*, by Prof. W. C. Van Bibber, of Maryland, was read by title; and one on *Dangers of Fecal Matters Disseminating Disease*, by Dr. W. S. Rosa, of Kentucky, was summarized.

A very able and exceedingly interesting account of

PULLMAN, FROM A SANITARY POINT OF VIEW,

by Dr. Oscar C. De Wolf, Health Commissioner of Chicago, Ill., was read by Mr. John K. Allen, of Chicago. The water, fire, drainage, sewage, irrigation, etc., systems of the place were given in detail, and created a genuine desire for more intimate knowledge of the town on the part of many. If what has been done here can, as appears, be made a success, it is to be hoped that it may prove but the forerunner of many model industrial communities which, with a basis of pure air, pure water, and pure soil, shall permit conditions of life now generally unobtainable by the working classes.

A paper on *Modern Sanitation*, by Dr. L. H. Montgomery, of Chicago, Ill., was read by title.

Dr. Edward H. Janes, Assistant Sanitary Superintendent of New York City, presented a paper on *Typhus Fever in New York City*, which, for want of time, was read by title, and referred to the Publication Committee.

A paper on *Catarrhus Baltimoriensis*, by Dr. John Morris, of Baltimore, Md., was summarized by Dr. Rohé of that city.

Dr. J. N. McCormack, of Kentucky, read a very brief paper on *The Restriction of Smallpox*.

The Secretary read by title a paper on *Preventible Contagious Diseases*, by Dr. David Ferguson, of Detroit.

Dr. Forment, of Louisiana, suggested cremation as a subject for discussion for the next annual meeting.

The Association took a recess until 7.30

The Evening Session

was opened by an able address by Right Rev. Hugh Miller Thompson, D.D., Assistant Bishop of Mississippi, on

SANE HUMANITY.

The address dealt vigorously with the moral features of sanitary duty, and that of man to his Creator to make the best of himself, and was a strong presentation of the obligation of the State and the individual.

Dr. Foster Pratt, of Kalamazoo, Mich., presented, as the closing paper of the meeting, an almost startling review of

INCREASED INSANITY IN THE UNITED STATES, ITS CAUSES AND SOURCES.

The paper, whose facts and figures were drawn from the last census returns, gave a most interesting and significant showing of the great increase of insantity in this country, and placed its source and cause largely to foreign immigration, much of it alleged to be of deliberate intent to fasten upon this country the burden of support of the imbeciles. In view of the fact that at the coming session of Congress the census returns will come up for much consideration, Dr. Pratt's forcible presentation of the subject is timely, and will not fail to attract attention. The paper, though very long, secured close attention.

At its close, Prof. Kedzie, of Michigan, offered a preamble and resolutions calling for Congressional action to prevent the

IMMIGRATION OF IMPROPER PERSONS, ETC.

The rules were suspended to allow immediate consideration of the resolutions. A spirited debate followed, participated in by Drs. Wright, of Michigan; Devron, of Louisiana; Walcott, of Massachusetts; the Secretary, and Dr. Gihon, of the Navy.

After some filibustering motions, the preamble, which was thought to state too strongly the degree of trouble arising from immigration, was amended, and then, together with the resolutions, was carried by a very large majority. The force of the resolutions is simply to call on Congress to take some suitable steps to put a stop to the immigration of persons, whether paupers, criminals, or imbeciles, who are almost sure to be added to the troublesome roll soon after, or upon their arrival. There seemed to be a gaining feeling that the consular service should be so enlarged in its force and scope, that insight of this condition might be placed in its charge.

An omnibus resolution of thanks to those by whose services the Association had been benefited was passed unanimously on motion of Dr. Reeve, of West Virginia.

A resolution of thanks for efficient services was given on motion of Dr. Gihon, of the Navy, to Dr.

Ames, the retiring Secretary, who, at the end of his three years' term, declined reëlection.

The retiring President then introduced his successor, Dr. Albert L. Gihon, U. S. N., who, in a few felicitous words, assumed the duties of the office.

The Association then adjourned to meet at St. Louis, Mo., at such date as the Executive Committee shall determine.

CORRESPONDENCE.

AN ANSWER TO "A PROTEST AGAINST THE USE OF THE METRIC SYSTEM IN PRESCRIBING."

To the Editor of THE MEDICAL NEWS.

SIR: In your issue of November 3d inst. appears a letter from Dr. James Orr, of Texas, under the above heading. I do not desire to provoke a controversy, but, as an advocate of the "metric system," I cannot let this statement go unanswered.

Your correspondent is peculiarly unfortunate in the three points which he submits as arguments against the new system, for in each one of them he is in error, and in each one of them is the converse of his conclusion true. He says: "1. In calculating the given quantity of a drug desired in a prescription, it can be done quicker by our or the English weights—grs., ʒ, ℥, etc."

This is true certainly of a physician who knows doses only in the old system. But if he knows the doses in the metric system equally as well as in the old—which is the proper standard of comparison—the metric system is infinitely the easier and quicker method of calculating quantities. Let us take an example. The dose of *morphia* is one centigram (0.01); the dose of *chloral hydrate* is one gram (1.00). We wish to write a prescription which shall contain six doses, of a tablespoonful each. Six tablespoonfuls make one hundred grams. We have

	Grams.	Decimals.	Old System.
℞.—Morphiæ Sulph. . .	0	06	gr. i.
Hydrat. Chloral. . .	6		℈ivss.
Syr. Aur. Cort. . .	25		ʒiv.
Aquæ, ... *ad*	100		℥iij.

What can be simpler than this? There is but one unit, the gram and its decimal parts, written in plain Arabic numerals. It is equally easy to write the same or any other prescription for any number of doses, the only thing requisite being a knowledge of the dose in *metric* terms. Of the difficulty encountered when one does not know the dose in metric terms, but must laboriously translate it from the incongruous weights and measures of the old system, I have nothing to say.

The same ℞. in the old system is given alongside the metric ℞. Who that is unprejudiced can say that it is simpler? There are four different units—grains, scruples, drachms, and ounces—related to each other by different and arbitrary ratios.

Three of them, scruples (℈), drachms (ʒ), and ounces (℥), are represented by arbitrary and unmeaning hieroglyphics, and the quantities are expressed in the awkward Roman numerals, instead of the Arabic numerals in common use. Another point which illustrates the superiority of the metric over apothecaries' weights in calculating quantities, is the use of percentages.

In making lotions, collyria, etc., we speak of so much per cent. strength; as a five per cent. solution of carbolic acid for a dressing to a wound.

What is simpler than writing

℞.—Acidi carbolici, ...	5 grams.
Aquæ, ...	100 " —M.

Use as lotion.

Calculate a five per cent. solution in grains and ounces, and see how great is the difference in simplicity and trouble. With just as great ease can *any* percentage be written for.

2. The second point of Dr. Orr is, that there is greater liability to error in the metric prescription than in the old form. If he compares a physician familiar with the old system, writing in the old way, with one who is also familiar with the old, but does not know the new—writing in the metric terms—he is probably right. But such a comparison is unfair. If we compare physicians equally familiar with the system in which they write, the advantage is altogether in favor of the metric.

In the latter there is but one unit; the quantities are written in plain figures and the aggregate shows the proportionate quantity of each. In the former there are as many units as are found in the tables of apothecaries' weights and measures; they are expressed by arbitrary hieroglyphics; quantities are in Roman numerals, and the aggregate does not show the proportion.

How often does it happen that a physician looking over a prescription he has written, finds he has written the drachm mark where he meant scruple, or *vice versâ*.

How is the pharmacist to know which is meant? To be sure it is careless writing, but it occurs continually, as the pharmacist's ℞ files will testifiy. Such a blunder cannot be made in the new system. As to the danger of misplacing the decimal, this is obviated by the use of the decimal line; then if a mistake is made, we have no apology to offer. It is just as reasonable to expect the merchant in his ledger, to charge his customer ten cents a yard for silk, instead of ten dollars, by putting it in the wrong column.

In fact, the decimal system applied to medicine is identical with our cental currency applied to money. It needs no argument to prove that our present money system is preferable to the old-fashioned "fips" (6¼ cents), "levies" (12½ cents), "picayunes," and "York shillings," or that it is far superior to the English system of £, shillings, pence, and farthings. Yet exactly the same differences hold in medicine between the new, or metric system, and the old, or apothecaries' weights and measures. I think, however, no one among us, not even the "oldest inhabitant," would be willing to exchange our dollars, dimes, and cents for the British coinage, or even return to the good old times of Colonial coinage.

The third point of Dr. Orr is that "It takes less time and space to write the old method." The only answer we need make to this statement is, that the difference in point of space between the old and the new is that in the former the value of each quantity, as gr. ℈, ʒ, or ℥, must be written with the amount, whereas, in the latter, there is but one unit, and only the quantities are given. This would make it appear that the "old method" takes *more* space than the new.

In the specimen of prescription given, a very poorly written metric prescription is chosen. I repeat it here in order to show how such a prescription should have been written, and then leave it to the impartial reader to judge whether it is so complicated or difficult to understand. The prescription Dr. Orr gives is as follows:

"℞.—Morph. Muriat., . . .	.0060.
Tinct. Cannab. Ind., . . .	.0800.
Chloroformi, ...	.1350.
Ol. Menth. Pip., ...	.0025.
Tinct. Capsici, ...	.0025.
Acid. Hydrocyanici Dil., . .	.0170.
Alcohol, ...	.3000.
Glycerinæ, ...	.4570.—M."

No dose is stated, but from the amounts I should suppose this to be intended for one dose. I cannot imagine who could have written such a prescription, and I do not wonder at any physician finding fault with it. It certainly violates every rule of correct prescribing, and must, I think, have been (in the journal from which copied) a clumsy attempt to translate grains and parts of grains into metric terms.

The observance of a few simple rules are a wonderful help to correct and easy prescribing:

1. The ingredients should be placed in the order of their strength and importance. If the mixture contains both solids and liquids, place the solids first in this order, and then the liquids, in like order.
2. Write down first all the ingredients intended to be ordered.
3. Determine the number of doses to be given in the prescription, and make the quantities to correspond.
4. If a liquid is ordered, let the vehicle be named last, and by placing after it the term "*ad*," or "*ad q.s.*," let it show how much the entire prescription calls for. In this way there is no necessity of adding up the amounts to see how much they make.

Now for this objectionable R—under these rules. We write down the ingredients in proper order, and determine to make twelve doses, of a dessertspoonful each.

This R is supposed to be an anodyne, for internal administration. The doses in the above copy of some of the ingredients are decidedly homœopathic. We shall give the usual doses, as follows:

R.—Morphiæ Sulph. (dose, 0.01), . .	0	12
Ol. Menth. Pip. (dose, 0.05), . .	0	60
Ac. Hydrocyan. Dil. (dose, 0.10), .	1	20
Chloroformi (dose, 0.30), . . .	3	60
Tr. Cannab. Ind. (dose, 2.00), . .	24	
Tr. Capsici (dose, 2.00), . . .	24	
Glycerinæ (dose, 2.00), . . .	24	
Alcohol, ... ad,	100	00

M. S. Dessertspoonful every 4 hours in water, until relieved.

It is not very often, I believe, that a physician writes as complex a prescription as this one, but when he does, he needs the metric system. A comparison between this and the example given in the paper criticised, will show the difference between a properly and an improperly written metric prescription.

[Obverse.]

METRIC PRESCRIPTION. Grams. Decimal.

R

[Reverse.]

METRIC SYSTEM IN MEDICINE.

Old Style.	Grams.	Decimal.
1 grain or 1 minim equals............	0	06
15 grains or 15 minims equal.........	1	00
1 dram or 1 fluidram equals	4	00
1 ounce or 1 fluidounce equals......	32	00

The Cubic Centimeter (C. C.) may be considered identical with the gram for water or aqueous solutions.

Liquids lighter or heavier than water should either be weighed or a proper allowance be made.

Being a pioneer in the metric line in my own city some four years ago, I anticipated trouble from the pharmacists in connection with my prescriptions. But few of them were familiar with the system, and at first there was some grumbling; but when they learned how simple it is, and obtained the weights and measures, there was no more trouble. Now I do not believe there is a pharmacist in the District of Columbia but prides himself on being able to compound "metric prescriptions." I enclose the form of prescription blank which I have always used. The reverse contains brief but ample directions for converting the metric terms into apothecaries' weights, for the benefit of such druggists who may not have metric weights.

This letter is in a measure an advocacy of the metric system, but space does not allow of any extended argument to prove its superiority. I will, therefore, close by stating briefly some of the reasons for its adoption generally:

1. Its simplicity—

   One unit of length = the *meter*.
   One unit of capacity = the *liter*.
   One unit of weight = the *gram*.
   One unit of cubic measure = the *ster*.
   One unit of sq. measure = the *are*.

   The divisions and multiples of these units are by tens. At present there are over seventy arbitrary units in use in the United States.
2. Its substitution for our present system of weights and measures would save an immense amount of time and labor in all forms of business. *It would save one year of school life for every child.* In Appleton's *Cyclopædia*, under article weights and measures of the United States, over seventy units are given as in use, and they are utterly independent of any systematic relation to each other. Think of having to multiply by 1728 to find how many cubic inches are in 1883 cubic feet! Yet this is but one item of but one of the miserable tables that all our school children are obliged to memorize. And not that only, but these heterogeneous tables must be applied to all the examples in arithmetic to be worked out during all the years the unfortunate juvenile is at school.
3. The metric system is the cosmopolitan system. It is legalized by twenty-three nations of the civilized world, and is in exclusive use in thirteen nations. It is legalized in the United States by special Act of Congress passed in 1866. The English foot is only in use in Great Britain, Russia, and the United States.
4. It is used by scientists in all countries.
5. It is used exclusively by the U. S. Coast Survey, the U. S. Marine Hospital Service, and the U. S. Navy. Also by a large number of physicians, especially in the north and northwestern sections of our country.

Other arguments might easily be adduced, but as this is not intended to be an exhaustive article, I rest here.

Objections to introduction of the metric system in the United States.

1. It revolutionizes existing weights and measures.
2. It is difficult, I might say well-nigh impossible for established physicians to forget the old system.

As to the first of these, each person must weigh the arguments *pro* and *con* and decide for himself. In my opinion, the "game is worth the candle."

As to the second objection, older physicians should not be expected to make the change, unless, indeed, they be teachers. But all students should be taught, and should learn the new system exclusively.

In this way a revolution may be accomplished without doing violence to any one's principles.

D. WEBSTER PRENTISS, M.D.
1224 NINTH STREET, N. W.,
WASHINGTON, D. C.

NEWS ITEMS.

BERLIN.

(*From our Special Correspondent.*)

The Cholera Commission.—Fortunately the good wishes which accompanied the Cholera Commission have been, to a great extent, fulfilled earlier than could have been anticipated.

Dr. Koch's first report, sent to the Secretary of State for the Home Department, gives an account of the excellent results obtained in a few weeks. The negative statement, that infectious germs were absent in the blood and in the large glandular organs of ten individuals who died from genuine cholera, would be alone of the greatest importance. A still greater step is the discovery of a certain species of rod-shaped organisms, unexceptionally present in the intestinal walls of the same individuals; and the fact that this species—which does not exist in other infectious diseases—is apparently quite the same as that which was found by Koch in cholera intestines sent to him from India last year, makes it but little doubtful that the bacilli in question are specific to cholera. Only the last link of the chain is still wanting, since it has not yet been possible to reproduce the disease by inoculation. The intended expedition to India, where the cholera is still prevalent, will show if Koch was right in assuming that the failure of his inoculation experiments was only due to a certain immunity generally gained by man and animals at the end of an epidemic.

The short additional remarks concerning researches made on bilious typhoid, dysentery, and Egyptian eye disease, open a fair perspective for the successful activity of our Commission.

The Wilms Memorial.—A colossal bust of the late Dr. Robert Wilms was erected October 30th, on the place opposite to the large hospital, at the Protestant Sisterhood, called Bethanieu, where the deceased had worked as a chief-surgeon since his twenty-eighth year.

Museum of Hygiene.—The hygienic exhibition has come to a close at the proposed term. The committee has resolved to retain the most instructive objects, with the permission of the exhibitors; this collection is intended to constitute the basis of a museum of hygiene similar to the Parkes's Museum in London.

Yellow Fever at Havana.—Sanitary Inspector Burgess in his abstract of Bills of Health issued to vessels bound to the United States from Havana, reports as follows: November 6, inspected and disinfected Spanish brig "Nuevitas" bound to Charleston, S. C., she has been 100 days in port at Havana, 20 of them at an infected wharf; Spanish bark "Habana" for New Orleans, 37 days in port, 29 of them at an infected wharf, has had one yellow fever case on shore and another on board just shipped—vessel disinfected before leaving; Spanish brig "Eugenia" for New Orleans, 50 days in port, 30 at an infected wharf, shipped a new crew, vessel was disinfected; Nov. 7—Spanish bark "D. Petronila" for New Orleans, 40 days in port, 20 at an infected wharf, suspicious fever occurred on board while in port, vessel disinfected; Nov. 8—Am. stmr. "Saratoga" for New York, and Am. stmr. "Morgan" for New Orleans, both healthy; Am. schr. "L. A. Edwards" for Pensacola, with a suspicious case of fever, supposed to be yellow fever, she was 20 days in port, 13 at an infected wharf where a suspicious case was sent to hospital. Nov. 9—Spanish bark "Trinidad" for Pensacola, 40 days in port, 20 at suspicious wharf, had suspicious sickness on board, was disinfected; Am. bark "Alice" for New York, 29 days in port, 12 at suspicious wharf, had five cases of yellow fever on board while at wharf, was disinfected; British stmr. "Texas" for New Orleans, healthy except several children with measles. Nov. 10—Am. stmr. "City of Merida" for New York, healthy; Am. schr. "W. Blackford" for Key West, 8 days in port, 4 at suspicious wharf.

There were 19 deaths from yellow fever for the week ending November 10th.

The Quarantine Fleet of four barges and a steamboat which has been anchored in the Mississippi River for two or three years past (late the property of the National Board of Health), was advertised and sold at New Orleans last week, by direction of the Secretary of the Treasury.

Why a Doctor's License was Revoked.—Dr. "Frank" B. Smith has begun a suit for $50,000 against Dr. John H. Rauch, Secretary of the Illinois Board of Health, whose name, he declares, was signed to a circular revoking his (Dr. Smith's) license for alleged unprofessional conduct. This conduct, the plaintiff says, consisted in his advertising his presence when he was a delegate to a health convention at Peoria.

Health in Michigan.—Reports to the State Board of Health, for the week ending November 10, 1883, indicate that measles, bronchitis, diarrhœa, tonsillitis, dysentery, puerperal fever, and diphtheria, have increased in area of prevalence.

Including reports by regular observers and others, diphtheria was reported present during the week ending November 10, and since, at nineteen places; scarlet fever at thirty-two places; and measles at nine places.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM NOVEMBER 12 TO NOVEMBER 19, 1883.

Bache, Dallas, *Major and Surgeon.*—Ordered to report in person to the Commanding General, Department of the East, for assignment to duty.—*Par. 10, S. O. 259, A. G. O.*, November 12, 1883.

Appel, D. M., *Captain and Assistant Surgeon.*—Granted two months' leave of absence.—*S. O. 68, Division of the Atlantic*, November 16, 1883.

Gardiner, J. de B. W., *Captain and Assistant Surgeon.*—Relieved from duty at Fort Huachuca, and assigned to duty as Post Surgeon at Fort Bowie, A. T.—*Par. 1, S. O. 104, Department of Arizona*, November 8, 1883.

Cochran, J. J., *First Lieutenant and Assistant Surgeon.*—Assigned to duty at Fort Bayard, N. M.—*Par. 5, S. O. 236, Department of the Missouri*, November 15, 1883.

Egan, Peter R., *First Lieutenant and Assistant Surgeon.*—Upon being relieved from duty at Fort Bowie, A. T., to proceed without delay to Fort Huachuca and report to the Commanding Officer at that post for duty.—*Par. 1, S. O. 104, Department of Arizona*, November 8, 1883.

Wilson, George F., *First Lieutenant and Assistant Surgeon.*—To report in person to Lieutenant Schwatka, Third Cavalry, Aid-de-camp, for temporary duty in connection with the completion of report of recent expedition to Alaska.—*Par. 3, S. O. 156, Department of the Columbia*, November 9, 1883.

The Medical News *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the News *should be addressed to No. 1004 Walnut Street, Philadelphia.*

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

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ORIGINAL LECTURES.

CHRONIC LEAD-POISONING.

A Clinical Lecture delivered at the Philadelphia Hospital, September 19, 1883.

BY JAMES TYSON, M.D.,

PROFESSOR OF GENERAL PATHOLOGY AND MORBID ANATOMY IN THE UNIVERSITY OF PENNSYLVANIA; ONE OF THE PHYSICIANS TO THE HOSPITAL, ETC.

GENTLEMEN: The patient whom I show you to-day presents, on superficial examination, nothing unusual in his appearance except anæmia, which is, however, less marked than it has been. This symptom is a part of the condition of which he is suffering, but the following history prepared by the resident physician, Dr. Culpepper, describes some more striking symptoms due to the same cause:

M. B., laborer, admitted August 3, 1883. He is 35 years old, born in Ireland; father died of phthisis; other family history good. He denies having had venereal disease, but is somewhat intemperate. He began to work in a white-lead works in April a year ago, and after two months was seized with abdominal cramps, and had to give up work. He recovered in two weeks, and then worked in a coal yard until May of the present year, when he again returned to the lead-works. One month later he was again seized with cramps, but persisted at his work until about a month before his admission to the house, when he was again compelled to give up. During this month he suffered from cramps in his fingers, toes, and abdomen, noticed that his legs and feet were swollen, and heard from his friends that he had had five epileptoid fits, although he has had none since his admission. He also noted an inability to straighten his wrists and fingers.

When admitted, he was suffering from abdominal colic, particularly on the left side, together with great and obstinate constipation. He had also a blue line on his gums. He was first treated with sulphuric acid, and afterwards with iodide of potassium in small doses. He has improved considerably, but still suffers from intermittent colicky pains, although his bowels appear to be tolerably regular.

It is scarcely necessary to say that our patient is a victim to lead-poisoning, but let us discuss the symptoms on which we base our diagnosis, and, if necessary, complete the picture of the disease by pointing out others which belong to it, but are not here present.

First, the *anæmia*, which, as stated, is less marked than it has been. This symptom is a very constant one in lead-poisoning, and its higher degrees are attended by a sallowness which early gave rise to the term *icterus saturninus*; but it must be remembered that this is not caused by bile pigment. In more serious cases, too, the impaired nutrition results in an emaciation which is sometimes extreme. Along with the anæmia are frequently noted a sweetish taste, with fetid breath, and loss of appetite.

The next symptom, which has been most striking in this case, and from which alone, in connection with the history of exposure, one may often diagnosticate lead-poisoning, is *colic*. Indeed this symptom, with the next to be considered, constipation, is often the sole manifestation of the disease, so that the term lead-colic has come to be recognized in medical terminology. It will be noted that in this case the colic was worse in the left side. It is more frequent in the region of the umbilicus, and is often relieved by pressure. It varies greatly in degree, being sometimes a simple, grumbling pain, at others of frightful severity, the patient writhing in the paroxysm, which, as a rule, does not last long, but is soon followed by another; but it may continue for hours or until relief is afforded by treatment. It is probably due to powerful contractions of the muscular wall of the intestine, by which the nerve-filaments distributed through it are compressed. Unlike flatulent colic the abdomen is not distended, but flat, and may even be retracted, sometimes so much so that it is said that the vertebræ may even be discerned through the abdominal walls. Still, distention of the abdomen is occasionally present. The pulse during the attacks of colic is often strikingly slowed, having been noted as slow as thirty per minute.

Constipation has been alluded to. It is very common, even more constantly present than the colic. And yet it is not invariable, and may even be substituted by diarrhœa.

It will be remembered that our patient suffered also with *cramps* in his fingers and toes, as well as with colic. This is a well-recognized symptom of lead-poisoning. Nor are these cramps confined to the fingers and toes. Groups of muscles anywhere, and especially flexor muscles, as of the arms and legs (the latter most frequently), become involved. In addition to these painful cramps, which, like the colic, are intermittent, there are pains in the neighborhood of the joints. The sum of these painful joints and muscles has received the name *arthralgia saturnina*. They are quite frequent, occurring, according to the statistics of Tanquerel, in 755 out of 2151 cases.

Our patient's history also contains a note of swelling of the legs. *Œdema* is a condition sometimes met with in lead-poisoning, but usually in the more advanced stages of the cachexia. It is impossible in this instance to decide whether the swelling was that of œdema or not.

I have called your attention to the *blue line* on the patient's gums. It is a very characteristic symptom, and appears at the border of contact of the gums with the teeth, or just above it. As a rule, it is easily recognized when present. It is caused by the presence of sulphuret of lead, produced by the action of sulphuretted hydrogen upon the lead in the tissue of the gums. Hence the line is more common and more distinct on the gums of those who take no care of the mouth, and in whom sulphuretted hydrogen is generated in the decomposition of food. Such has been the case with our patient. This line often remains after all other symptoms have subsided, and although it is not invariably present, its disappearance may be considered a pretty sure sign that the harmfulness of the lead has been suspended.

Another symptom of great importance is *muscular paralysis*. This, in contrast with the muscular cramp, is more likely to involve extensor muscles than flexors, and especially those of the wrist, giving rise to the very characteristic symptom known as "drop-wrist," which, in Tanquerel's experience, occurred in 107 out of 2151 cases. Our patient appears to be free from it now, but there was evidently loss of power at one time in the extensors of the wrists and fingers, shown by the inability to straighten them. This is what would be expected in a case of comparatively short exposure, like the present; for, usually, it is not until the colic and arthralgia present themselves that the wrist-drop appears. On the other hand, it has been the first symptom observed. It may last but a few days, or it may resist all treatment. It may affect a single muscle, or groups of muscles. It is further characterized by the fact that the muscles affected are subject to rapid atrophy, so that they almost seem to disappear; dislocations of the more movable joints, as the shoulders and phalanges, may occur in consequence. While sensibility is but slightly impaired, electro-muscular contractility rapidly disappears. The muscles cease to respond to the faradic current, while the reaction to galvanism is unchanged, or slightly increased at first. Tremor of the paralyzed muscles is often observed.

Another set of symptoms of lead-poisoning, not uncommon, suggested by, if not actually present in, the case before us, are those due to involvement of the central nervous system. You will remember that he had convulsive seizures, which were considered by his friends as epileptic. Nevertheless, I can scarcely conceive that such involvement has taken place; for the symptoms developed by neurotic changes are not so prompt to disappear. Occurring usually only in those who are peculiarly exposed, they come on in from eight days to fifty years, the majority showing themselves, according to Tanquerel, within the first nine months. The most frequent mode of manifestation is in eclampsia, as in the case of our own patient. But there may be headache or amaurosis, apathy, stupor, or the opposite condition of maniacal excitement, or melancholia and hallucinations.

A frequent complication of lead-poisoning, more especially where it has been present for some time, is *interstitial nephritis*, and its resulting morbid product —the contracted kidney, as shown by the presence of a small degree of albuminuria and tube-casts; and as this is the form of kidney disease in which uræmic convulsions are most frequent, it is evident that these must be distinguished from the convulsions just referred to as a part of the saturnine encephalopathy. Hence, an examination of the urine in every case of lead-poisoning should be early made in the study of the case. In this case the urine was examined with negative results.

In consideration of the evident *etiology* of lead-poisoning, we need only pause to enumerate a few of the many ways in which the intoxication may be brought about. That house-painters and workers in white-lead factories are frequent victims to lead-poisoning, goes without saying. That we, in the cities, who receive our immediate water supply through leaden pipes, do not more frequently acquire the disease, is, at first thought, more surprising. But this, too, is easily explained. It is the very impurities of our drinking waters which save us. Almost all drinking-waters contain sulphate of lime, the sulphuric acid of which combines with the superficial layer of lead and forms an insoluble coating of sulphate of lead. Should it happen, however, that water of unusual purity, as rain water, is stored in lead-lined tanks, or even painted tanks, it not rarely happens that families are poisoned thereby. Among the recognized causes is the use of cosmetics and hair-dyes containing lead, and even the use of vegetables canned in tin vessels. A very interesting case of lead-poisoning from this source was published in a recent issue of The Medical News (Sept. 8th), by Dr. Wm. Magruder. All grades of what is known as tin, which is really iron coated with a layer of tin, contain a small quantity of lead; and the more inferior the tin the larger the quantity of lead. Now certain conditions favor the solution of this lead. Thus, if any of the vegetable acids, as acetic, tartaric, or citric, be present, they may dissolve the lead and thus form soluble salts, which are readily absorbed. Of course, such solution is favored by prolonged action of the acids; hence old canned vegetables are more dangerous than those recently canned, and it would be a wise measure to insist that canned fruits and vegetables should be stamped with the date of the canning. The solder used in closing the cans may also be a cause of poisoning from this source; when it is considered, however, how enormous is the consumption of canned fruits and vegetables, and how few the cases of lead-poisoning traceable to it, it is evident that even moderate precautions may suffice to remove the danger altogether.

Among the more rare causes of lead-poisoning mentioned by Naunyn in his article on lead-poisoning, in Ziemssen's *Cyclopedia*, have been the result of cooking in badly glazed crockeryware, drinking beer drawn through lead pipes, or beer and wine from bottles which have been washed with shot, of which some have been left behind, the use of snuff packed in spurious tin-foil containing lead, and from sleeping on mattresses, the hair in which was dyed black by some lead-containing substance; and one, a most incredible case, is that of a proof-reader who was poisoned after many year's reading of printed proof. Notwithstanding the solubility of the acetate of lead so much used in medicine. it is very rare that poisoning has resulted from its administration, and there need be no fear of using it for the purposes to which it is adapted until at least a couple of drachms have been given.

It has always been an interesting question, how lead in the system operated to produce its peculiar effects. That the lead itself lodges in the tissues, is easy of demonstration, and analysts have gone so far as to determine the exact quantity in the different tissues of animals poisoned by lead; which, by the way, is surprisingly small, the largest amount found being a quarter of one per cent. in the bones, while that in the muscles was but .002 to .003 of one per cent. It was formerly the custom to ascribe the phenomena of lead-poisoning partly to the direct action of lead in the tissues; the cramps and the palsy to the presence of lead in the muscular fasciculi; the colic to the lead in the unstriped muscular fibre-cells, and the nervous symptoms to the lead in the nerve-centres. In part, too, these phenomena were ascribed to the anæmia of the tissues due to the contraction of the arterioles induced by the presence of lead in the muscular coat. More recently, however, the soundness of these views has been shaken by some experiments of Heubel, and the tendency appears to be to ascribe the phenomena of lead-poisoning to neuroses which are undoubtedly central in the case of the encephalopathic phenomena, and which are probably central in that of the peripheral symptoms. On this supposition, the phenomena of lead-poisoning have been compared to those of chronic alcoholism, which are ascribed to effects upon the nerve-centres due to the long-continued circulation through them of blood charged with alcohol.

The *morbid anatomy* of lead-poisoning may be quickly disposed of, for, so far as studied, it has none which is essential to it. That is, although we find the paralyzed muscles in a state of fatty metamorphosis, yet this alteration is secondary. If it be true, as is now claimed, that the phenomena of the disease are due to alterations in the central nervous system, the microscope should discover changes which we would expect to be primarily of an interstitial character, but nothing bearing upon this has been reported, so far as I know, until quite recently,[1] when Moies published the results of some experiments upon guinea-pigs, which he dosed with acetate of lead until they died with symptoms of plumbism. On post-mortem examination, in addition to granular and fatty changes in the surface and glandular epithelium of the alimentary canal, infiltration of the adventitia and muscular coats with leucocytes which were undergoing degeneration, hemorrhages, and superficial ulcerations, *scleroses of the ganglia with atrophy of their cells and nerve-fibres* were noted; also overgrowth of the connective tissue of the gastro-intestinal wall, kidneys, liver and *central nervous system*. Here, again, the question arises as to which of these results is primary. Moies is inclined to regard the protoplasmic changes as the first event, and the connective-tissue hyperplasia the result of this, while he considers that the resulting sclerosis causes further atrophy of the active protoplasmic elements, including the muscular fibres.

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[1] Virchow's Archiv, xc. p. 455. Dec. 1882, and Centralblatt f. d. med. Wiss , 1883, p. 358. See also abstract in Med. Times and Gaz., Sept. 6, 1883, p. 269.

As to *prognosis*, it depends largely upon the degree of saturation of the system with lead. As a rule, therefore, persons who respond most quickly to the action of the poison are those who most promptly recover, provided, of course, they are removed from the influence of the lead; for such persons, too, being most susceptible, are in great danger from prolonged exposure. We are enabled to infer something of the prognosis from the symptoms which are present. If the attack be ushered in by a colic, and there be no other symptoms except constipation, we may confidently expect our patient to recover completely. If there be arthralgia and palsy, the prospect is less certain; still less so if there be atrophy; and least of all if there be encephalopathia, when complete recovery is hopeless. So, too, I have never known a case of contracted kidney due to lead-poisoning, to pass away. No favorable prognosis should be given where the patient is unable to remove himself from the cause. It must be remembered, too, that relapses occur, often at long intervals, even when the patient is removed from exposure, and that the primary disease has been known to make its appearance a long time after exposure.

Treatment.—Much may be done to guard against the occurrence of lead-poisoning by proper precautions on the part of those exposed to it. Thus, those employed in lead-works may do much to protect themselves, or rather their employers may do it for them. Thus, such persons should keep themselves scrupulously clean by frequent hot baths and frequent changes of clothing, which should never be allowed to become saturated with lead. Mehu recommends that hypochlorite of sodium be added to the hot baths. It is made by mixing in two and a half gallons of water thirteen ounces of chlorinated lime with sodium carbonate. Sulphur baths were recommended by Todd, it being thought that sulphur has the power of neutralizing lead by forming insoluble compounds with it. From two to four ounces of sulphuret of potassium are mixed in from twenty to thirty gallons of water. Above all, the employés in lead-works should not be allowed to eat their meals in the lead-factory, as the metal is often introduced with the food Finally, the ventilation of the factory should be of the best. Experience has shown that much may be done to arrest the dangers of lead-works by such precautions. The same remarks with regard to cleanliness, bathing, and change of clothing, apply to painters, and indeed to all who have to do with lead in any shape or degree. It is evident that lead-lined and painted cisterns should never be used in houses; that cosmetics and hair dyes are dangerous, and that care should be taken in the selection of canned vegetables which may have been too long canned.

The curative measures may be divided into those for the immediate relief of urgent symptoms and the removal of the lead from the system. It is scarcely necessary to say that the patient should be promptly removed from the influence of the lead. The extreme pain of a lead colic requires to be relieved by the hot-bath or poultice, and the opiate, of which the best mode of administration is by the hypodermic syringe, one-quarter or one-third of a grain of sulphate of morphia being required for the purpose. Identical treatment is required for the arthralgia. The accompanying constipation is best relieved by sulphate of magnesium, the sulphuric acid of which, on theoretical grounds, at least, aids in rendering inoperative the lead which has entered the system, by forming an insoluble sulphate.

These more urgent symptoms being relieved, measures directed to the elimination of the lead should be taken. The hot baths already referred to may be used for this purpose, as well as for prophylaxis, and purgatives and diuretics may aid in the elimination. The iodide of potassium is the remedy most relied upon to eliminate the lead from the system. It is believed that after its absorption into the system the lead becomes intimately united with the albumen of the tissues, forming an insoluble compound; that the iodide of potassium, after its absorption, combines with the lead, and forms a soluble iodide of lead, which is dissolved out, reënters the circulation, and is passed out with the urine and feces. It is evident that elimination by these channels will be encouraged by purgatives and diuretics. It is even suggested that acute lead-poisoning may be produced by the liberation of the soluble lead salt into the blood in this way. Hence, caution is suggested in the use of the iodide. Practically, I can scarcely conceive this to occur with such doses as are ordinarily given. Our patient is taking ten grains three times daily, which, after a while, will be reduced to five, but this dose will be kept up indefinitely. Remember that iodide of potassium is more efficient when given fasting and freely diluted.

For the paralyzed muscles, faradaic electricity is indicated, and should be daily administered, both to resist the tendency to atrophy and to overcome it.

That restorative and blood-making remedies, in the shape of nutritious, easily assimilable food and iron, should also be given to antagonize the cachexia which is always a part of plumbism, is evident. In view of the nervous lesions which may be at the bottom of the phenomena, we should expect strychnia to be a valuable adjunct to our treatment, and it is generally so considered. It should be given in full doses, $\frac{1}{30}$th of a grain three times a day, and increased to a $\frac{1}{20}$th, which should be kept up. Ergot is said to have been useful in increasing the power of the muscles involved in the palsy.

ORIGINAL ARTICLES.

A CASE OF GASTROSTOMY FOR CARCINOMA OF THE ŒSOPHAGUS,

WITH A BRIEF ANALYSIS OF THE RESULTS OF 137 CASES OF A SIMILAR NATURE.

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ON the 7th of February, 1882, a shoemaker, 64 years of age, presented himself at the surgical clinic of the Jefferson Medical College Hospital on account of difficulty of deglutition. Five months previously, in swallowing solid food, he first noticed trouble, which rapidly increased, so that at the expiration of four weeks he was able to take only fluid nourishment in the form of milk, soups, and oatmeal gruel. For the past month his sole diet was milk, to which he occasionally added a little whiskey, but only when he felt very weak, on account of the pain which it excited. The amount of milk that he drank during this period averaged about two pints a day. At times it occasioned suffering and a sense of constriction in the chest, and was now and then ejected.

The man was pale, debilitated, emaciated, and weighed only eighty pounds. Exploration with a bougie detected an obstruction, situated at eleven inches and a half from the level of the incisor teeth, through which instruments could not be passed. From the absence of a history pointing to cicatricial stricture, I diagnosticated carcinomatous obstruction of the œsophagus at the point at which it is crossed by the left bronchus. In view of his increasing prostration and the outlook of death from starvation, I explained to him that gastrostomy might prolong his life, but at the same time fully impressed upon him the risks of the procedure. He at once expressed a wish to take the chance offered him, so that he was placed in a ward and his rectum prepared for the reception of nourishment.

With the assistance of my father, Professor S. D. Gross, and Professor Brinton, Dr. Hearn, Dr. Allis, Dr. Packard, and Dr. Nancrede, I did the first step of the operation under chloroform, which was preferred on account of its less liability to provoke vomiting than ether, and with strict antiseptic precautions, on the 9th of February. An incision, two inches and a half long, was made half an inch below and parallel with the eighth and ninth left costal cartilages down to the peritoneum, and bleeding arrested with hot-water and one carbolized pure silk ligature. On incising the peritoneum to the same extent as the outer wound, the stomach at once filled the opening, its omental attachment being fully in view. The centre of the exposed portion having been grasped with tenaculum forceps, two silver wires were then passed, so as to penetrate the muscular coat, at the distance of six lines from each other, their object being to steady the organ during the succeeding steps of the operation and during the puncture to be made in its second stage. Eight silver sutures were next inserted through the entire thickness of the edges of the central portion of the wound and through the muscular wall of the stomach, through which perfect apposition of the peritoneal surfaces was ensured, when the remainder of the incision was closed with ordinary stitches. The usual carbolized gauze dressing was then applied, the operation having required one hour for its completion.

The patient reacted well. On the evening before the operation the pulse was 100, the respiration 24, and the temperature 101°. On the following evening the pulse was 96, the respiration 34, and the temperature 101.2°. The dressings were removed on the second day and reapplied, the condition of the parts being excellent. On my regular visit at 11 A.M., Feb. 13th, I found him to be in a most critical state. The thermograph of the previous evening indicated pulse 115, respiration 30, and temperature 101.2°; and of that morning, pulse 118, respiration 30, and temperature 99.3°. I was informed that at 4 A.M. there was low, muttering delirium, with panting and feeble respiration. Up to the time of my visit, nourishment had been administered with great regularity by the rectum, the articles having been milk, beef juice with pepsin and dilute hydrochloric acid, eggs, and scraped beef and pancreas, which alternated with one another, and to which a little brandy was occasionally added. I now administered brandy and milk by the mouth, and soon afterwards opened the stomach by a small puncture, through which beef juice and brandy were poured through a funnel into the organ. The man, however, continued to sink, and died at 3 P.M., or ninety-nine hours after the operation.

At the post-mortem examination, the attachment of the stomach to the wall of the abdomen was found to be firm. There was no peritonitis. The liver was hobnailed, and the large vessels of the belly and thorax were extensively calcified. The œsophagus was occupied by an ulcerated epithelioma two inches long, the centre of which was crossed by the left bronchus. The post-œsophageal lymphatic glands were carcinomatous, and the ulcer of the neoplasm had extended into the mass of glands, through which the obstruction had assumed a sigmoid configuration. The tube itself was dilated above the seat of the disease.

This is another case of gastrostomy in which the operation was too long delayed. Even if I had seen the patient when the low delirium indicated approaching collapse, I doubt whether the administration of food by the mouth or by the stomach would have been of any avail. In a case of a similar nature, I would not wait so long for the completion of the second step of the operation, but would open the stomach at the end of forty-eight hours, when the adhesions would be sufficiently firm to resist the peristaltic movements of the organ. Indeed, when the case is urgent, rectal alimentation may with propriety be supplemented by feeding by the mouth, provided small quantities of proper food, such as koumiss, be administered, after the expiration of twenty-four hours, since there is sufficient post-mortem evidence of firm adhesion at a far earlier period than one would imagine. Thus, in the case of Berger, the union was solid in nineteen hours; in the cases of Croly and Le Fort in twenty-four hours; and in that of Reeves, in thirty hours. In studying the records of the 64 fatal cases from exhaustion, I am satisfied, when the operation of Howse is practised—an operation in which the stomach is not opened until its fixation is presumed to be firm—that some lives might have been saved by feeding by the mouth or through the stomach sooner than was done. The post-mortem evidence in regard to adhesion in the cases just referred to is, therefore, most valuable for future guidance in this direction. In another class of cases, the operation of Howse is inapplicable; there can be no delay whatever, and the stomach must be opened at one sitting.

As gastrostomy for carcinoma is merely a palliative operation, its designs being to relieve the pangs of hunger and thirst and to prolong life, its statistics merely indicate the chances of survival. Its mortality is by no means inconsiderable, as would naturally be expected when the exhaustion from deficient alimentation and the changes produced in other organs by secondary growths are taken into consideration. I have collected the details of 137 operations, which will be made the subject of a future and more complete paper, of which 31 perished as the result of the procedure—17 from peritonitis, 9 from pleurisy, bronchitis, and pneumonia, 4 from gangrene of the stomach, and 1 from uræmia—the mortality being, therefore, 22.6 per cent. 64 cases died of exhaustion, at varying periods up to the expiration of one month, but of these, 37 succumbed within forty-eight hours, so that shock doubtless was a factor in these examples. If we regard all of the 37 as having been due to shock, 137 operations afford 68 deaths, or a mortality of 50 per cent. Be this as it may, 95 died within a month, and 42 survived longer than a month.

The success of gastrostomy is progressively improving. Up to January 8, 1879, Petit[2] had collected 46 cases, of which 7, or 1 in every 6.57, lived for upwards of a month. Up to the middle of 1883, Alsberg[1] had collated 93 cases, with 29 survivals, or 1 in every 3.20, after one month. Both Petit and Alsberg, however, include in their statistics examples of cicatricial structure, which yield better results than when the operation is done for carcinoma. Of the 137 cases which I have analyzed, 42, or 1 in every 3.26, lived for upwards of a month, and as they were all examples of carcinoma, it is evident that the results are growing better and better. Of the 42, 17 died subsequently, 3 in two months, 3 in two months and a half, 3 in three months, 2 in four months, 1 in five months, 1 in six months, 1 in six months and a half, 1 in seven months, and 2 in eight months, and of the remainder, 9 were living, respectively at the end of two months, two months and a half, three months and a half, four, five, six, and seven months, and twelve months and nine days, while another made a rapid recovery and gave birth to a healthy living child.

The case that was still alive upwards of one year is so remarkable that it is worthy of more than passing notice, particularly as I am able to add some facts to the original report.

On the 18th of February, 1882, Mr. Walter Whitehead,[3] of Manchester, excised the tongue, close to its base, of a man, forty years of age, on account of carcinoma, and opened the trachea, on the following day, for impending suffocation. On the 8th of March, the pharynx being blocked by the growth, and starvation being threatened, the first step of gastrostomy was performed, and the stomach was opened on the 19th. In answer to a letter inquiring into the sequel of the case, Mr. Whitehead wrote me, under the date of March 28, 1883: "I have to inform you that he is still alive. The glands—submaxillary, cervical, and sublingual—are very much enlarged, but painless. He can swallow fairly well and has discontinued the use of the gastric fistule. He suffers very little inconvenience from his condition, and, although he cannot live much longer, he is emphatic in his assertion that since the operation he has suffered no pain, whereas beforehand his life was one incessant period of unbearable suffering."

While not strictly a case of carcinoma of the œsophagus, it was substantially the same thing, as it interfered with deglutition, and threatened life from inanition. The man had gained nearly a stone in weight in four months, and was able to articulate with remarkable distinctness. Such a result must be regarded as a surgical triumph, and speaks more in favor of gastrostomy than would any arguments that could be made for it.

1112 Walnut Street, November 24, 1883.

AN EASY METHOD OF STAINING BACILLUS TUBERCULOSIS.

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The examination of secreta and excreta for bacilli is growing to be of such importance that a simple method, which will put such examinations within reach of every medical practitioner familiar with the use of the microscope, is greatly to be desired. My own experience, and that of friends who have talked with me on this subject, leads me to believe that the methods commonly employed do not always give satisfactory results. In many cases where the bacteria were undoubtedly present, the methods of Koch, Ehrlich, and others have failed to reveal them, although the examinations were made strictly in accordance with their directions. Weigert has lately published (*Deutsche medicinische Wochenschrift*, June, 1883, No. 24) a method which gives very good results. My own method, however, which is a modification of his, has given me more satisfactory results than any other which I have tried.

I place the sputum between two slides instead of between cover-glasses, and thus obtain easily the thin layer which is so necessary for examination. This is a matter of very great importance, as all the subsequent operations are greatly simplified by the use of the slide instead of the cover-glass.

In order to evaporate the water, I heat two flat dinner plates over the alcohol lamp or Bunsen burner, taking care that one of them is not hot enough to burn the hand. The slide is then placed upon the cooler plate and covered by the hot one, when the water quickly evaporates.

Meanwhile, I get ready four tumblers with clear water and my solution of nitric acid (one part nitric acid to two parts distilled water), and filter one teaspoonful of a two per cent. gentian violet solution into a small watch-glass. This is stirred up with a glass rod which has been dipped into a bottle containing strong water of ammonia (the glass rod should not carry more than one drop of the liquor ammoniæ). With a dropping-tube kept specially for that purpose, a few drops of this staining solution are then transferred to the dried sputum on the glass slide, which has previously been drawn, not too quickly, three times through the flame of a Bunsen burner or alcohol lamp, in order to fasten the sputum to the slide. The slide, with the staining-fluid on it, is then held at some distance over the flame, until evaporation sets in. Then the staining-fluid is poured off, and the slide dipped into a glass of clean water, after which it is at once put into the nitric acid solution. It is left there until the color has disappeared, which takes a few seconds. It is then washed off again in pure water, and should the color reappear in this, it should be once more submitted to the nitric acid bath and washed out again in clean water. A few drops of a saturated vesuvin solution in water are next dropped on the slide and left there for about thirty seconds, then washed off —always in pure water, when the specimen will show a slightly brownish color.

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[1] Traité de la Gastrostomie, Paris, 1879.

[2] Archiv für klinische Chirurgie, Bd. xxviii. Heft 4, 1883.

[3] British Medical Journal, vol. i., 1882, p. 133.

Four to six drops of absolute alcohol are next poured on the slide, which is then placed slanting, to allow the alcohol to flow off and evaporate. After the slide has thoroughly dried, a few drops of xylol are dropped on it and left to evaporate, when by covering the specimen with a cover-glass, after having put on one drop of Canada balsam dissolved in xylol (dimethyl-benzol), it is ready for examination, *and will keep for any length of time*. A homogeneous immersion lens is very desirable, but not absolutely necessary if one only wants to see the bacilli; but a condenser is indispensable. The bacilli appear violet, while the rest is stained slightly brownish-yellow. The staining solution is prepared by dissolving two parts of gentian violet in one hundred parts of distilled water; and to prevent the solution from spoiling, it is well to add a small quantity—about ten cubic centimetres—of absolute alcohol to one hundred grammes of the solution, which may then be kept until it is wanted.

THE ANTISEPTIC TREATMENT OF A DISCHARGING EAR BY THE DRY METHOD.

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The method of aural practice which is the subject of this paper, was first published in the *Transactions of the Missouri State Medical Association*, May, 1880; since which time it has grown in favor, and has taken its place among the established therapeutical procedures. The general practitioner will discover in its extreme simplicity a grand merit, while the specialist cannot fail to be gratified at this invaluable addition to his resources against the serious class of aural disorders in which it is efficacious.

This method of treatment of a discharging ear (suppurative or catarrhal, otitis media or externa, acute or chronic) may be thus summed up: The ear, as a rule, is to be cleansed with absorbent cotton to the absolute exclusion of syringing or other customary methods of washing out the discharge; next, borax or other antiseptic powder (boracic acid, iodoform, etc.) is to be insufflated. Like all other methods of practice, this one must be modified according to circumstances that will be more or less self-evident. An old accumulation of inspissated secretion must necessarily be removed by syringing; a very tender ear in a restless child,—such exceptional cases plainly require exceptional treatment. Also, the presence of polypi, dead bone, narrow fistulæ, and other inaccessible seats of disease; all these represent complications to the proper inflammatory condition, and will require modifications of the above stated rule. But there is a large class of cases, including the great majority of the frequently observed acute and chronic aural inflammations with discharge, that will be properly treated according to the dry method.

Bezold, of Munich (*Arch. f. Ohrenheilk.*, June 13, 1879), was the first to insist upon pure antisepsis in the treatment of otorrhea—Listerism introduced into the domain of otology. Bezold's bold departure from established modes of treatment by instillation, he amply justified, and his justification stands. Unfortunately, he did not adopt the full rubric of Listerism, he still used the syringe and ignored the dry method of antiseptic applications. It would take too much space to state in detail the anatomical peculiarities of that remarkable cavity—the tympanum; yet some reference may be excused for the purpose of presenting, in the strongest light, the mischief that the syringe, in aural treatment, is capable of inflicting. The middle ear with its numerous small osseous recesses, its pockets formed by the ossicles and folds of the membrana tympani, to say nothing of the freely communicating mastoid cells, may be regarded as a congeries of small cavities, an arrangement eminently adapted to foster chronic discharge and to frustrate local treatment.

When the ear is syringed, there is always the possibility that the pus may be driven into parts as yet free from disease, parts that, from anatomical reasons just stated, are difficult of access for medical interference. Pus, we know, sometimes is infectious; decomposing pus is irritating. An immediate danger that cannot be overlooked is, that in case of perforation of the petrous or mastoid region, with abscess of the brain, the syringed water may aggravate, or even initiate, cerebral symptoms, and precipitate death. Such abscesses may exist unsuspected; this is well known. Politzer figures such a case in the last edition of his work on the ear. I have found a similar condition at a post-mortem, the cerebral abscess communicating directly through a fistula with the tympanic cavity, the bone demonstrating long-standing disease. Besides these direct risks, syringing is attended by another serious objection, in that it tends to increase the œdema of the parts, or at least cannot be thought to relieve it; the tissues are sodden in the midst of the discharge, and saturated with exudation; this condition is disastrous to rapid recovery. It may be urged that Bezold's saturated boracic acid solution, by osmosis, will deplete the tissues. How far in the end this may be is problematical. Absorbent cotton removes the pus by attraction and not by repulsion, at once avoiding the risk of forcing pus or injected liquids into remote parts, and in no way adding to the existing excess of moisture. Again, syringing, even when done with great care, sometimes causes vertigo. An obvious pathological reason for not syringing is that application of water is likely to hinder cicatrization, by washing off the newly formed epithelial cells. In dermatology, this fact is well recognized, and made the basis of a law. Briefly stated, the reasons for not using the syringe or other like methods in cleansing an ear from discharge are these:

Irritating secretions are likely to be driven into healthy cavities opening into the tympanum.

Direct pressure may be made upon the brain-tissue through a fistula.

The local œdema is encouraged.

Cicatrization is interfered with.

The absorbent cotton may be aided in cleansing the tympanum by forcing out the pus by the air-douche, acting through the Eustachian tube; or, in case this passage is impervious, the secretions may be drawn into the meatus by gentle suction through a rubber tube, one end of which is lightly pressed into that canal; the suction may alternate with equally gentle insufflation. The cotton is best introduced upon the end of a slender probe, a wisp being twirled about the point, so that the soft cotton shall extend well beyond the metal; thus placed, and carefully inserted into the meatus, the cleansing with cotton is more likely to be an agreeable operation to the patient than otherwise. After the ear has been thus cleansed and dried, and the processes of natural repair have been encouraged to the utmost, shall we next proceed to disturb this state of things by dropping aqueous solutions into the ear when special indications do not exist? (Instillation of alcohol is akin to the dry method, provided the alcohol, after a moment's retention, when it has become diluted through osmosis, is removed.)

In order to avoid the introduction of water into the ear, we may resort to the use of powdered drugs or of medicated cotton. It has been recommended that pledgets of medicated cotton be left in contact with the fundus of the ear to secure constant medication and continuous absorption of the secretions; such a procedure would be in exact accord with the antiseptic method in general surgery, with this fatal distinction, however, in the circumstances of application—in the one case, there is a free surface to be covered with the antiseptic dressing; in the other, we have to do with a long and narrow canal. Unless kept under close supervision, such pledgets will become saturated with the secretions, and prevent free discharge, a disastrous result; also, their presence is that of a foreign body.

By the use of powders in the ear, we can secure antisepsis, and local treatment as well, without incurring the evils just described. Borax, boracic acid, and iodoform are antiseptic powders convenient to use. They are to be puffed into the ear in any desirable quantity through an insufflator: Dr. Burnett suggests a quill scoop that is to be slipped into a rubber tube, which is a simple enough arrangement. I use an insufflator of silver, the scoop part fitting into a collar that is permanently attached to the rubber tube with mouthpiece. As to the choice of powders, I prefer the borax for a routine application; it is more readily soluble than boracic acid, and is an energetic fungicide. Dr. Walb, of Bonn (*Centralbl. f. klin. Med.*, 1883, No. 34), states that boracic acid actually encourages the growth of moulds. Besides, it is dispensed in the powder form, while the acid requires to be specially pulverized, a tedious process. As to iodoform, its value is impaired by its pungent odor and little solubility, whereby it clogs the canal if freely used, besides obscuring the field; this last is a serious objection.

The amount of powder to be insufflated at any one time and the frequency must depend upon the case. A small amount of discharge will require only a coating of the fundus in case of tympanic disease, which coating may not entirely dissolve for a day or two; free discharges will require that the canal be well filled daily to insure antisepsis. Of course, the dissolved antiseptic by diffusion will penetrate into the recesses of the tympanum immediately communicating. When the powder remains unchanged day after day, the discharge evidently has ceased; in rare cases, by reason of a very glutinous condition of the diminishing secretion, the powder may become mingled in the scant discharge without entirely dissolving, and the whole will harden together, requiring to be washed out.

To conclude, the dry method, by assisting nature, hastens a cure, and by doing away with repeated syringing and instillations spares both surgeon and patient much inconvenience and loss of time. I repeat, the method is no panacea, only an invaluable addition to our existing therapeutics, and a reform in practice.

CASE OF PROLAPSE OF THE URETHRA.

By R. H. Day, M.D.,
of Baton Rouge, La.

Prolapsus urethræ is an affection but rarely occurring, so uncommon, indeed, that many physicians of long experience and varied practice have never seen a case; hence its literature is scant and but little known.

I saw my first case a few months since, after being for more than half a century engaged in the general practice of medicine; and I confess that I harbored the opinion that no author had ever written of this disease. Under this belief, I wrote to Prof. S. D. Gross of my case, when I was informed by him that he had treated of it in his work on the *Urinary Organs*, and also in his *System of Surgery.*

Upon reference to Prof. Gross's work upon the *Urinary Organs*, I find the following:

> "The mucous membrane of the urethra, like that of the bladder, with which it is continuous, is liable to become inverted and prolapsed at the external orifice of the canal. The affection is extremely rare, and is, for obvious reasons, confined to the female sex. No regular account has yet been published of it, as our data are still too limited and imperfect to enable us to do justice to the subject."

Referring to my library, I find that Prof. Thomas, of New York, in his work on the *Diseases of Women*, also speaks of this affection, and says—

> "This accident which has likewise been described as procidentia and inversio urethræ, consists of prolapse of the urethral mucous membrane, with proliferation of the underlying connective tissue. It is not commonly met with, but at times produces considerable irritation of the urethra and bladder, and leads to an erroneous diagnosis of irritable caruncle. I have met with it only in adults of enfeebled constitution and advanced age; but Guersant, in the *Rêvue de Thérapeutique*, declares that he has seen fifteen cases in little girls between two and twelve years ot age."

In view of the rarity of this disease, and the little that has been written in elucidation of it, I am induced to report my case with the treatment and result.

On Saturday, the eighth of September last, I was requested to visit a colored girl, aged between six and seven years. On entering the house, the mother informed me that on the Sunday night previous, her little daughter was in great pain, and tried to urinate frequently, that suddenly, while straining over the night-vessel, her womb came down, and that she had been losing blood ever since, like a woman having her *courses* on her.

The little girl was seen that night by a physician. What he did I could not learn, but the child got no better, and suffered during the week with painful and frequent micturition, and painful dysenteric stools. I found her with some fever, perhaps of an irritative character. Yet the tenesmus and the character of her stools led me to prescribe a few doses of calomel and Dover's powder, and quinine to antagonize the malarial element that I thought I detected in her case.

Examining the vulva I found a dark-red tumor protruding through the labia, covering the clitoris and occluding the ostium vaginæ. It had a rough appearance, was flattened or slightly depressed in the centre with a sort of fimbriated border, and bled upon the slightest touch. I soon satisfied myself that it was not the uterus; first, from its shape, and secondly, by elevating the lower border I could see the ostium vaginæ. I thought it might be a vascular excrescence surrounding the urethral opening, but its granular and villous surface made me doubt the correctness of this view. At any rate I deemed it best for the present simply to sponge the tumor frequently with cold water, and to relieve her general or systemic symptoms.

On the 10th I visited my patient again, and finding her general health better, I made a more thorough examination of the tumor, and diagnosticated, beyond a doubt to my mind, that it was prolapsus of the mucous membrane of the urethra, and determined upon an operative procedure for its removal.

On the 13th, assisted by Dr. J. W. Dupree, after again exploring the tumor, and both of us being satisfied that the diagnosis was correct, I proceeded to operate. Anæsthetizing our patient with chloroform, Dr. Dupree raised up the everted borders with a pair of dressing forceps, and I passed around its neck, at its narrowest part, a strong, well-waxed silk ligature, and drew it sufficiently tight to produce complete strangulation. I then, with a pair of curved scissors, removed all of the tissue above the ligature, and cauterized the cut surface with the solid nitrate of silver. The ligature was then cut loose and a pledget of absorbent cotton saturated with carbolized oil applied between the labia in contact with the cut-surface, and retained by compress and bandage. The child was kept in bed in a horizontal position, with instructions to reapply the dressings as often as needed.

The next morning I found the little patient suffering great pain from retention of urine. I administered chloroform and drew off a large quantity of urine without any difficulty in introducing the catheter; continued local application, and applied over the vulva and lower part of abdomen a flaxseed poultice. After this there was no further trouble in urinating, and the part rapidly healed. To-day, she continues perfectly well, and upon examination the urethra appears as perfect and natural in appearance as though no operation had been performed.

Now in analyzing this case, there are several questions that naturally and pertinently present themselves.

First, did the protrusion of the urethral mucous membrane suddenly occur on the night of the second of September, as the mother stated? or had the prolapse been progressing for some time previously, unnoticed by the mother, and only discovered on the occasion named, by the sufferings of the child, and perhaps at that time aggravated by the straining efforts induced by her dysenteric condition?

I could not solve these questions satisfactorily to my own mind, though I critically catechized both the mother and the child. If the prolapse previously existed, it was not observed or recognized by either. But it seems almost impossible to conceive that an affection of this kind, and to such an extent, could suddenly take place when we bear in mind the anatomical conformation of the female urethra, and the necessarily limited diameter of its canal, in a child as young as the subject of this accident. It is more reasonable to suppose, that from previous intermittent fever, from which she had suffered during the summer, there was relaxation of all the tissues, and that the urethral mucous membrane, which had been gradually prolapsing unobserved, becoming intensely congested by her bowel complication on the night in question, and was then for the first time discovered.

This view of its origin seems to be justified from the statements of Prof. Thomas, who says: "I have met with it only in adults of enfeebled constitution and advanced age." It is true, that Dr. Thomas does not give the number of his cases, and hence his experience may not be sufficient to justify a positive opinion on this point.

Second, were the operation and its mode of performance, though perfectly successful, the best? This I conceive to be, after all, the most important question to decide. I confess that at the time I was greatly perplexed in my own mind how I should proceed. Then, I had not consulted my authorities, and if I had ever read what their teachings were, I had forgotten them, and was left to reason the thing out for myself upon general principles.

It was clear, since the prolapsed and hypertrophied urethral mucous membrane, forming a considerable tumor, could not be replaced, its removal was the only alternative. Excision and the ligature were the only methods at my command. By excision, the bleeding might be considerable, requiring torsion or ligature to control it, or involving the use of other expedients, thereby consuming much time. Its removal by ligature would obviate these difficulties, and be equally effective and expeditious. I decided upon the ligature, combined with excision, and was successful.

Since the operation and its results, I have consulted the only two authors in my library who treat of this disease, and I am convinced that my mode of operation was theoretically and surgically correct and proper.

The reader, by reference to Dr. Thomas' work on the *Diseases of Women*, pages 119 and 120, will find a corroboration of my procedure in principle, while the plan which I pursued is much more simple and easy of execution in all its details.

Prof. Gross lays down no specific mode, but says:

> "When the disease is obstinate, or has resisted the more ordinary remedies, excision may become necessary, as in the case observed by M. Seruin, already alluded to. Having assured himself, by repeated and careful examinations, that the tumor formed no part of the bladder, but consisted wholly of the mucous membrane of the urethra, he cut it off, without any hesitation, with a bistoury, on a level with the meatus of the tube; a slight hemorrhage ensued, but soon ceased spontaneously, and the cure was as prompt and complete as the operation was easy and simple."

Before I conclude, I will add that, within two weeks of the first case, another was brought under my observation—this, too, in a colored child only fifteen months old—a fine, large child, and in perfect health otherwise. The mother says she has noticed the tumor for several months. The child does not seem to be notably inconvenienced. I made a careful examination, and had no difficulty in detecting its true character.

The meatus urinarius, upon separating the labia, is distinctly seen in the centre of the prolapsed and everted urethral mucous membrane. Laterally, the tumor is slightly compressed, making its longest diameter from the clitoris to the ostium vaginæ. The tumor is small, and gives so little annoyance that I did not feel justified in advising, for the present, its removal. I am trying to effect a cure by astringent applications, and, I think, with diminution of its size.

I am now using a solution of tannic acid in glycerine. I shall watch the case and the results of the treatment, and be governed accordingly, and report the case, if deemed of sufficient interest.

HOSPITAL NOTES.

BELLEVUE HOSPITAL, NEW YORK.

THE TREATMENT OF FRACTURES BY THE PLASTER-OF-PARIS DRESSING.

Reported by J. H. Woodward, M.D., House Surgeon.

Plaster of Paris is most frequently and most successfully used here in the form of the plaster-of-Paris bandage. The bandage should be made of crinoline or cheese-cloth; crinoline will hold more plaster in its meshes, and on that account it is the better material to use. Crinoline (or cheese-cloth) is cut into strips two and a half or three inches wide, and eight or twelve yards long. These strips are rolled up moderately tightly, like the ordinary roller bandage; and while they are being rolled, a thin, even layer of dry plaster of Paris, recently baked, is spread upon the upper surface of the crinoline. The bandage, being thus thoroughly filled with the plaster, is wrapped in a piece of newspaper and placed in a covered tin box, where it can be kept dry until used.

Splints are constructed with this bandage in the manner to be described immediately. For example, simple fractures of the tibia and fibula are often put up within a few hours after admission to the hospital. If the surgeon thinks that there will not be any unusual swelling of the limb, he does not hesitate to apply the immovable splint. In such cases, a very thick layer of ordinary cotton is wrapped about the foot and leg, from the toes to just below the knee. An assistant maintains the bones in good position while the splint is being made. The paper is now removed from the plaster bandage, and it is placed on end in lukewarm water, which is just deep enough to cover the bandage, about a handful of salt having been added to the basinful of water. The bandage is squeezed two or three times to facilitate the entrance of the water into it, and when saturated (*i. e.*, after the lapse of about a minute), it is removed from the water and squeezed as dry as possible. About one foot of it is then unrolled and cut off; the remainder is passed snugly over the layer of cotton, by the figure-of-eight turn, from the toes to just below the knee. The bandage applied thus, should be smoothed with the hands, and dry plaster of Paris may be rubbed into it. A second and a third layer are put on in the same way. Three layers of this bandage make a very firm splint; two layers are quite sufficient for the first splint, if you propose to keep the patient in bed during the first ten days after the receipt of injury. If the limb is considerably swollen, the patient is usually kept in bed until the first splint is loose. Under such circumstances two layers of bandage are sufficient.

Having enveloped the fractured limb in two (or three) layers of the plaster-of-Paris bandage, it is placed upon a soft pillow which is moulded extemporaneously, so that the posterior of the splint will not be flattened or the leg bow backwards. Sand-bags, or some substitute, should be placed beside the leg to keep it quiet and prevent angular deformity, and the foot should be kept flexed upon the leg, either by a sand-bag or some other support. The patient is cautioned to keep very still. This splint, exposed to the air, will harden satisfactorily in from one to three hours.

Unless signs of strangulation of the leg appear, and they must be looked for diligently when this immovable apparatus is applied so early in the case, or the patient complain of unusual pain in the part, the splint may remain upon the leg until it is loose, *i. e.*, for a week or two. It is then cut down with a strong sharp knife; before cutting, nitric acid may be applied along the line of incision to soften the plaster. Having removed the splint and the cotton, you should examine the limb and correct any deformity. The fractured bones should be maintained in good position by an assistant while the second, and usually final, splint is applied. A roller bandage of old blanket, or of thick flannel, should be passed around the limb in a spiral, covering it from the toes to just below the knee. Then three layers of the plaster-of-Paris bandage are applied by the method already described. The bandage should be laid upon the limb smoothly and snugly. If it is put on lightly, the splint will be loose as soon as the plaster is hard; if it is applied tightly, the veins may be strangulated. Wind the bandage on snugly, and the splint will be a success. This splint should be treated, while the plaster is setting, just as described for the first splint. As soon as the plaster is hard the patient may go about on crutches.

It should be stated that all simple fractures are not put up in these splints as soon as admitted. A large number are treated in that manner, but the majority are not. During the period of inflammation, the injured leg is usually kept in the fracture-box and treated with cold or other astringent applications. As soon as the swelling has subsided the immovable apparatus is put on.

Such is the method of using plaster of Paris in ninety-nine per cent. of all the fractures of the tibia and fibula, femur and humerus that present at Bellevue Hospital. Fractures of the femur are not put up in plaster early in the case, however. The immovable splint is seldom carried above the knee-joint in cases of simple fracture of the tibia and fibula; and, although this practice is contrary to an established rule of surgery, it does not seem to be followed by any bad results.

The plaster-of-Paris bandage is used to make gutter splints and fenestrated splints, both of which are employed in the treatment of a variety of injuries and diseases. Wishing to make a fenestrated splint, we apply the plaster-of-Paris bandage according to the method described. The limb is now completely covered by the bandages, and, when the plaster has dried thoroughly, a fenestrum is cut through the splint with a knife at the proper situation. Fenestrated splints constructed in this manner are extensively employed in the treatment of compound fractures, in cases both in which the wound is small enough to be sealed and in those in which it is large enough to require frequent dressing. The edges of the fenestrum may be protected by rubber-tissue, oiled silk, or any other suitable waterproof material. Should it be necessary to cut a very large fenestrum, strips of iron or zinc are included in the splint in that vicinity to increase the strength of the apparatus. Strips of iron or zinc are also frequently included by the plaster splint, even when it is not fenestrated. Gutter splints especially are strengthened in this way where they cross a joint, and the plaster spica for the hip should always be reinforced in front of the hip-joint by an iron band between the layers of bandage.

The plaster-of-Paris bandage is employed also in manufacturing the bracket splint for compound fractures. That apparatus is quite a favorite one with many surgeons, and is used extensively in the hospitals of New York. In order to construct it, select pieces of hoop-iron about one inch wide and as long as the given case requires. These iron bands, three or four in number, are bent upon themselves, so that, when applied to the limb, the iron will stand away from it above and pass back to it below the wound. The site of fracture is thus bridged across by the irons. One layer, or more, of plaster-of-Paris bandage is then laid upon the limb above and below the seat of injury, and over the padding of cotton or the blanket roller. The irons are then fitted accurately to the parts and bound firmly to them by a number of layers of the plaster bandage. The splint made in this fashion is allowed to dry, and the case is dressed at the site of the fracture as often as the surgeon desires.

The plaster-of-Paris bandage is often applied outside of the Lister and other closed antiseptic dressings to maintain the limb in good position, both in compound fracture cases and in cases where joints have been operated upon for various diseases. Two layers of the bandage usually suffice, and furnish a very satisfactory apparatus for such cases.

Bavarian splints are seldom used in New York hospitals; but a splint made of plaster of Paris and cheese-cloth is frequently adopted. The advantage presented by this splint over the roller bandage splint is that it hardens in a few minutes, and hence the limb may be held in position by an assistant during the setting of the plaster. Anterior, posterior, and lateral splints are more readily made by this process than by any other that I have seen tried. But the splints are more apt to be worthless than are those made with the bandage, for reasons to be indicated presently.

In order to construct such a splint, you should proceed in the following manner: Suppose that you wish to make anterior and posterior splints for the foot, leg, and lower half of the thigh. For the anterior splint, cut three layers of cheese-cloth long enough to pass from the toes to the middle of the thigh, and wide enough to cover one-half the circumference of the foot, leg, and thigh. Three more layers of cheese-cloth are cut of the same length as the first, but about an inch and a half narrower. Finally, three layers of cheese-cloth two inches wide, of the same length as the former, are prepared. For the posterior splint, cut five or six layers of cheese-cloth wide enough to cover one-half the circumference of the foot, leg, and thigh, and long enough to extend from the toes to the middle of the thigh. Of course, in measuring these strips, allowance must be made for the increase in circumference of the limb made by the dressing and the padding. Having prepared the cheese-cloth, a plaster-of-Paris cream should be made. To prepare this, take the best plaster that can be obtained, and be sure that it is free from dirt and moisture; into a basinful of quite warm water, in which a handful of salt has been dissolved, stir the plaster slowly until a moderately thick cream is made. The anterior splint should be passed through the cream first. Saturate the wider pieces of the cheese-cloth first, and lay them upon the limb and smooth them down nicely; and then saturate the second three layers of the anterior splint with the plaster cream and apply them to the limb. Finally, saturate the narrower strips with the cream, and lay them upon the median line of the former layers and smooth all down nicely, and add more of the cream to the splint with the hands. If you intend to suspend the limb, iron rings should be passed upon the narrowest strips of cheese-cloth before they are applied to the other layers. The posterior splint is now put through the plaster cream and saturated with it; then it is applied to the posterior surface of the foot, leg, and thigh. These manœuvres must be performed with celerity, or the plaster will begin to set before the next step in the process is taken. Such an accident endangers the value of the splint, which is apt to crack at important points, and be weakened thereby. Having placed the anterior and posterior strips upon the limb, they should be held in proper coaptation and bound upon the limb by plain crinoline bandages, which have been moistened. Of course, any description of bandage may be used instead of the crinoline, but the latter, when dry, is quite firm, on account of the starch contained in it, and is, therefore, better than the ordinary muslin bandages. The limb may be held by assistants for a few minutes until the plaster is dry, or it may be supported on pillows. After the plaster has set, the limb may be supported by slings passed through the iron rings.

This variety of splint is a very excellent one, and is used extensively in the Bellevue Hospital. Now and then, it happens that the plaster will not set; but, if the cream is made of the proper consistency, and of good plaster of Paris, that accident will not occur very often. In mixing the plaster cream, especial care should be taken that it is not made too thick. Instead of cheese-cloth, old blanket, or flannel, or carbolized gauze, or any material which is of coarse texture, may be used in constructing such splints as these. Old blanket is frequently substituted with advantage here, especially when we wish to make a strong posterior splint for the lower extremity.

Such are the methods daily employed in the manufacture of plaster-of-Paris dressings in New York. A very detailed description of the various procedures has been given, because any description of them, to be a reliable guide, must be as specific as possible. The various steps in these processes have been followed by the reporter day after day during the past year, and he has seldom observed the plaster-of-Paris dressing to fail to be satisfactory, when it has been carefully made according to the foregoing plans. And he cannot recall a single instance where harm has resulted to the patient from the immovable apparatus itself.

MEDICAL PROGRESS.

Corrosive Sublimate in Puerperal Antisepsis.—**Paolo Negri** has adopted this agent as an antiseptic at the Maternity at Novare. He finds a solution of one to two thousand sufficiently strong as a rule. During four months at this Maternity, the statistics show not one death among the fifty-one cases; and but very little sickness.

Negri draws the following conclusions:

1. The toxic effects of corrosive sublimate employed in the usual strength, one to fifteen hundred or two thousand, is almost nothing; in one case only, he had slight mercurial exanthema.
2. The solution of the strength of one to two thousand is sufficiently powerful to prevent puerperal sepsis.
3. This solution will completely substitute the two to one hundred solution of carbolic acid generally used.
4. The sublimate has the advantage over carbolic acid of being cheaper, and having no odor; this last consideration being not unimportant in private practice. —*Bull. Gén. de Thérap.*, October 30, 1883.

The Etiology and Pathogenesis of Phthisis.—**Prof. Sormani**, in an article on this subject, draws the following conclusions:

1. Tubercle bacilli are not found in the breath of phthisical persons. 2. The tubercle bacillus is preserved for a long time unaltered in the sputum of phthisical patients, resisting putrefaction and desiccation. 3. This bacillus retains its virulence for a long time, but gradually grows more feeble. 4. Tuberculosis acts, therefore, not as a directly contagious disease, but indirectly, by means of the dried tuberculous sputa, pulverized and suspended in the air. 5. The prophylaxis of phthisis should tend to the prompt destruction of tuberculous sputa, and to the efficacious disinfection of chambers by destroying the infecting tuberculous material. —*Annali Univ. di Med. e Chirurg.*, Sept. 1883.

Myomatous Tumor of the Prostate in a Child Thirteen Months Old.—At the meeting of the St. Louis Medical Society, September 29, 1883, **Dr. Mudd** presented this specimen. The child had been healthy until within a few weeks of the time of its last illness. When Dr. Mudd was called to see the child, it had suffered for several days with retention of urine, passing nothing but a little water at a time; the bladder was very much distended. The child had passed a little water, from time to time, and the mother had not noticed any distention of the bladder. This retention, which came on suddenly, was persistent until death, which occurred about two weeks after he first saw the child. Upon examination of the child before death, by passing the finger into the rectum, he could feel a large tumor presenting anteriorly. The tumor was connected with the bladder, and could be outlined pretty distinctly. He could then determine that it was uniform in its outline, uniform in its consistency, and could feel, after emptying the bladder, by bimanual palpation, the outline of the tumor very distinctly. Upon making the post-mortem examination, he found that the bladder was about as might be expected in a child of thirteen months; but there was a tumor springing apparently from the prostate gland, that was as large as a small lemon, and which presented upon the mucous surface of the bladder—it was a hypertrophy of the middle lobe of the gland, so as completely to occlude the passage of urine. From the microscopic examination, which was made by Dr. Luedeking, it appears that the character of the tumor is a hyperplastic myoma of the prostate gland. The structure of the prostate gland seems to have been lost in the hypertrophy of the muscular tissue — the muscular tissue is non-striated, such as is found in the bladder. It is the opinion of Dr. Luedeking, that the hyperplastic growth may have been developed as an intra-uterine growth. As could be seen upon examination of the specimen, the mass of the tumor would not interfere at all with micturition, the interference coming only from the projection of the third lobe. It is very distinct, and projects as little nodules, cutting off the passage of the water. It is remarkable, from the fact that it comes from so small a child—remarkable by presenting no characteristics of malignancy; simply presenting a hypertrophy of the muscular tissue.

As to the cause of death, he found that the pelvis of the kidney was involved in the inflammatory action, probably from the obstruction to the outflow of urine; the calices of the kidney structure also were involved. He supposed that death occurred from disturbance of the kidney and retention of urine. The appearance of the tumor is very much such as will be found described by Paget as a hypertrophy of the gland in old persons. No such appearance was observed in the child.—*St. Louis Medical and Surgical Journal*, November, 1883.

Laryngeal Chorea.—**M. Blachez** read a paper on this subject at the meeting of the Académie de Médecine, on October 16th. From his researches on this subject it appears that laryngeal chorea is less rare than is generally supposed. He has seen two cases of the affection in children. The first child, lymphatic and born of an arthritic mother, was taken with a slight laryngitis with spasmodic cough, which presented, every few days, very peculiar characters. There were no choreic phenomena on the part of the limbs; all the movements were regular. Bromide of potassium, valerian, and belladonna, completely failed; chloral alone gave a decisive and rapid result. Two very intense febrile movements came on, and the affection disappeared.

The second child, lympho-anæmic, was taken during the course of a slight bronchitis, with paroxysms characterized by a peculiar piercing cry, somewhat resembling that of a toy goat. The cry came on eight or ten times in a few minutes, and the paroxysms several times during the day. They never came on during sleep. The child was nervous, always agitated, but had no true choreic movements. Large doses of bromide of potassium completely broke up the attacks.

It appears to M. Blachez, then, that bromide of potassium and chloral are to be particularly recommended in laryngeal chorea. He based his diagnosis on the hereditary arthritic antecedents of the two children, on the absence of multiple and varied nervous phenomena, on the integrity of the psychical functions, and on the absolute suspension of the paroxysms during sleep.—*L'Union Méd.*, October 18, 1883.

The Iodoform Treatment of Ruptured Perineum.—The short confinement to bed, and the absence of purulent secretion with iodoform dressings, have induced Behm to follow this method of treating ruptures of the perineum.

The instruments and the wound are first disinfected by means of carbolic acid solution, the lips of the wound are trimmed and bleeding stopped by most careful pressure with wadding pads. If primary union is wished for, he only puts a thin layer of iodoform in the wound; in two cases, in which too much iodoform was used, primary union did not take place.

Two complete, and twenty-eight incomplete ruptures were treated in this manner: Of the first two, one healed without trouble, while the other, dressed thirty-six hours after delivery, after the rectum and bladder were emptied, healed only incompletely, with a recto-vaginal fistula. Of the twenty-eight incomplete ruptures, twenty-three healed by primary union. Behm has had no cases of iodoform intoxication.—*Centralbl. f. Gynäkologie*, August 18, 1883.

Cubitus Valgus.—Under this name L. von Lesser describes a deformity which is somewhat similar to that producing genu valgum. It consists in the production of an obtuse angle, opening posteriorly during forced extension of the forearm on the arm. At the fold of the elbow it makes a projection anteriorly. Posteriorly there also exists an obtuse angle, the summit of which corresponds to the epicondyle, this angle being equally apparent in pronation of the forearm. The olecranon is so closely drawn to the epicondyle that the ulnar nerve is pressed upon in its groove, and in prolonged extension the patient experiences, in the little finger, sensations peculiar to pressure on that nerve. The epitrochlea is situated in a higher plane than is the epicondyle. In forced extension the head of the radius is found pressed posteriorly into a position of subluxation, and its cup is easily felt below the exaggerated projection of the epicondyloid muscles.—*Virchow's Archiv*, Bd. xcii. Heft. i.

Phosphorus in the Treatment of Osteomalacia.—Busch has recently reported two cases of osteomalacia treated by phosphorus. The first was that of a woman, æt. 30 years, who seemed to be in excellent health. The objective symptoms were limited to the bones of the pelvis, which appeared to be involved on both sides. The symphysis pubis projected forward, and the horizontal rami of the pubes were markedly incurvated. The woman was unable to walk, and could only move from the bed to a chair with extreme difficulty. Busch prescribed absolute rest in the horizontal position for three months, giving at the same time Wegner's phosphorus pills. After five months' treatment the patient could go up and down stairs without difficulty. At this time she was lost sight of.

The second patient was a woman, æt. 50 years, who complained of violent pain in the right arm, at the point of insertion of the deltoid. Osteitis was diagnosticated, and treated by the ordinary means. There was no amelioration of the symptoms, and she came under Busch's care. She was extremely emaciated, could not walk, and presented many deformities: kyphosis ot the spine in the dorsal region, and lordosis of the cervical portion of the vertebral column; the head seemed forced down between the shoulders; the thorax was deformed, the thighs curved, and the pelvis presented the characteristic deformities of osteomalacia. She was put on Wegner's phosphorus pills, and took them for eighteen months. At the end of that time the bones were quite firm, and she could walk without pain.

The formula for Wegner's pills is as follows:

Phosphorus,	grs. iv.
Simple Syrup,	f℥ij ♏xx.

Mix and add—

Powdered Liquorice,	ʒijss.
Powdered Gum Arabic,	℈iv.
Powdered Gum Tragacanth,	ʒss.

Make 250 pills. S. 2 pills a day.

This dose may be increased.—*Progrès Méd.*, October 27, 1883.

Neuralgic Ciliary Pain Cured by Stretching the Nasal Nerve.—Mr. John Garey reports the following case, coming under the care of Mr. Henry E. Clark, at the Glasgow Eye Infirmary.

M. C., æt. 49, presented himself on April 3, 1883, suffering from acute irido-cyclitis in right eye, with considerable muddiness of the vitreous. He stated that he had received a blow on this eye two years previously. He was ordered to have ext. bellad. applied over the supraorbital region, the eye was bandaged, and a purgative administered; he was instructed to bathe the eye frequently with the compound lotion used in this institution. On his return the following week he complained of very severe supraorbital pain, extending as far as the crown of the head; the pupil did not yield to the action of atropine, and the ciliary region was very sensitive to the touch. He was ordered to take one grain of calomel and half a grain of opium every night at bedtime. Three days later, the pain not having appreciably diminished by this treatment, the artificial leech was applied over the right temple, and a small quantity of blood abstracted; from this he experienced considerable relief, but it proved to be only temporary in character, and in a few days the pain returned with all its former intensity. It had now certain neuralgic features, and was distinctly intermittent, commencing generally about five o'clock in the morning and disappearing about two in the afternoon. He was put on phosphorus pills (B. P.), $\frac{1}{30}$th grain every six hours, and under this treatment the pain soon disappeared, and he was sent to Dunoon Convalescent Home. While there he for a time continued well, but on catching a slight cold, the affection became lighted up afresh, and he was compelled to return before the expiration of his term there to undergo further treatment. We administered full doses of bromide of potassium, and kept him at rest in bed, but with no lessening of the pain; free phosphorus was again tried, and persevered in for twelve days, but it appeared entirely to have lost its influence. Mr. Clark now suggested stretching the nasal nerve, and the patient being willing to submit to anything that offered a chance of relief, the operation was performed on August 1st, without the aid of an anæsthetic. An incision about one inch in length was made in the upper eyelid, running obliquely downwards and inwards, from the level of the pulley of the superior oblique nearly to the inner canthus The orbital periosteum being exposed, a strabismus hook was carried backwards close to the bone, and after one or two abortive attempts the nerve was caught in the hook and drawn forwards. It was fully exposed, so as to make quite sure that the right structure was being pulled, and pretty firm traction was made on it in the axis of the inner wall of the orbit. This part of the operation caused most excruciating pain to the patient. The wound was brought together with sutures, and dressed with boracic lint; it healed kindly in the course of a few days, and he was dismissed on August 6th, the neuralgic pain having entirely disappeared. Since that time he has had no return of the neuralgia, and the eye retains a fair perception of light, but the pupil being almost closed, it will be necessary to perform an iridectomy at a later date.

The connection of the nasal nerve with the nutrition of the eyeball has so long been recognized, that we can quite understand that some change will be produced in the nutrition by the elongation of that nerve, but we are as much in want of anything like a plausible theory of the exact mechanism by which such change is brought about in this instance as in other cases of nerve-stretching. That the operation is attended with much improvement of the condition of the patient is evidenced, not by this case alone, but by numerous others very similar in their nature, and it seems to be especially effective where the pain is very acute and very persistent.—*Glasgow Med. Journ.*, Nov. 1883.

Ectopia Cordis.—M. Marey read a report, at the meeting of the Académie de Médecine, on October 16th, of a case of ectopia of the heart observed in a woman under Prof. Tarnier's care.

The woman presented a congenital division of the sternum and diaphragm, with eventration and congenital hernia. The bifid condition of the sternum enabled the examiner to see the ventricles under the skin; their greater axis was almost vertical. The right was more accessible; the flaccidity of the skin enabled him to seize the ventricular mass in the hands and to compréss the aorta.

By auscultation a systolic souffle could be heard, which appeared to correspond to a narrowing of the root of the aorta; in other respects the functional action of the heart appeared to be normal. Inspection alone of the heart's movements would seem to show that the sudden ventricular diastole caused the heart beats, but the placing of the finger on the ventricle showed that the pulsation takes place during the ventricular systole. The registration of the pulsations of the heart showed that the ventricles are synchronous as to their action, except when irregularities of their rhythm were produced; that the pulsation coincided with the diminution of the volume of the ventricles, and consequently with the time of the ventricular systole.—*L' Union Méd.*, October 18, 1883.

A Case of Wandering Liver.—Dr. Felix Schwarz reported a case before the k. k. Gesellschaft der Aerzte, in Vienna, on June 8th. He believed that he was supported in his diagnosis by the symptoms of the case, which are:

1. When the liver is entirely sunken downward—the absolute liver-dulness begins, while the thorax is in the position of expiration, in the right mammary line at the upper border of the seventh rib, and reaches four inches beyond the free border of the ribs. In inspiration absolute liver-dulness begins in the right mammary line at the free border of the ribs; percussion is somewhat tympanitic in the sixth intercostal space; there is a clear tympanitic note in the fifth interspace, and from the fifth upward there is normal pulmonary resonance. Between the border of the ribs and the left lobe of the liver, during inspiration, is a furrow one inch wide, running toward the left hypochondrium, which gives a dull tympanitic percussion.

2. The smooth upper surface, the sharp border, and the longitudinal fissure of the liver can be easily felt in the mesogastrium.

3. On the liver being replaced the liver-dulness begins at the fifth rib, and extends a little over one inch below the free border of the ribs in the right mammary line. In the right parasternal line it extends three inches beyond the free edge of the ribs, in contrast with five inches in the displaced state.

4. The liver is movable, not only upward, but to the right and left. When the patient lies on the left side the liver falls toward that side, and the greater part of the right lobe can be felt in the scrobiculum cordis. Finally the liver can be forced into the right hypochondrium without much opposition on the part of the organ. The fifth symptom, relaxation of the abdominal walls, did not exist in Schwarz's case; on the contrary, the standing posture made the walls so tense that an examination could only be made in the horizontal position.

There are fifteen cases of wandering liver reported in literature, thirteen in females, and two insufficiently described cases in males.—*Wien. Med. Presse*, No. 24, 1883.

Parenchymatous Injections in Uterine Affections.—Dr. Adrian Schuecking describes the following method of making parenchymatous injections into the uterine tissue:

After having introduced a speculum into the vagina, and fixed the neck of the uterus, he forces into one of the lips of the cervix a long syringe-needle. Before and after the injection, the cervix is washed with a disinfecting solution. He has never seen any undesirable consequences after this procedure. The slight hemorrhage caused by the needle he regards as rather advantageous than otherwise; in fact, more useful than scarification.

Schücking thinks that parenchymatous injections should be substituted, in gynecology, for the subcutaneous method, being more convenient and efficacious. Immediately after the injection, the cervix is seen to become pale, and diminished in size. There can be no doubt of the absorption of the injected medicine, for one patient stated that the distinct metallic taste was perceived as soon as when the substance was given hypodermatically.

Thus far Schücking has used parenchymatous injections in the following affections:

1. Uterine fibroma—four cases—while the action of ergotine given hypodermatically seemed to be doubtful, after about twenty parenchymatous injections, he constantly noticed either a diminution of the hemorrhage or in the size of the tumor, or both.

2. Incomplete puerperal involution causing prolapse and retroflexion of the uterus. By injecting, three times a week, half a syringeful of an aqueous solution of Fowler's solution (1–3), he has seen the uterus regain its normal position after about fourteen injections.

3. Erosions with hypertrophy of the cervical glands—eight cases—interstitial injections of tincture of iodine, combined with touching the cervix with pure acetic acid, caused much more rapid recoveries than when the acetic acid alone was used.

4. One case of exudation into the broad ligaments.—*Berlin. klin. Woch.*, July 2, 1883.

THE ORIGIN OF VACCINIA.—M. WARLOMONT, of Brussels, read a paper on this subject before the Académie de Médeciné, on October 16, drawing the following conclusions: 1. Neither horses, cows, nor any other animals can be considered as vaccinogenous. Neither horses nor cows can directly give rise to horsepox and cowpox; either must have previously received the originating germ. 2. The original cause of vaccinia, in its relation to the cow and horse, is nothing else than variola; introduced into the organisms of these animals, it there undergoes an attenuation resulting in vaccinia. 3. This attenuation is less in the case of horses than of cows; consequently, horsepox more nearly approaches the character of variola. 4. The horse is, therefore, less fitted for the culture of vaccinia. 5. Artificial variolic or vaccinial impregnation in the horse by inoculation or intra-cutaneous injection, seems to be produced very much as in the case of the cow, and immunity should be the result of this impregnation.—*L' Union Méd.*, October 18, 1883.

INTRAPULMONARY INJECTIONS IN BRONCHIECTASIS.—DR. O. SEIFERT has made intrathoracic injections of ♏ xxx of a three per cent. carbolic solution, in cases of two patients affected with bronchiectasis. In the first case inhalations of spirits of turpentine, perchloride of iron, tannin, and carbolic acid had been tried without any good result. After each injection it was evident that the expectoration had completely lost its fetid odor and had diminished in quantity.

The second patient died in the hospital. Seifert made a post-mortem examination with the view of noting the traces left by the injections. On a level with the site of the last injection, made two days before death, there was found, on the pulmonary pleura, a spot of hemorrhagic infiltration with a central point corresponding to the prick of the instrument. The traces of the other three injections made on the sixth and fourth days before death were only shown by a slight pleural pigmentation. It is evident, therefore, that no injurious effects follow from these punctures. They are only very slightly painful, only cause cough when thrown into moderately large cavities, and cause no rise of temperature.—*Berlin. klin. Woch.*, June 11, 1883.

POISONING BY COAL GAS.—In connection with the recent Hygienic Exhibition at Berlin, popular lectures were given from time to time by various eminent men upon important matters of public health. One of the last so delivered was by PROF. PETTENKOFER, who chose for his subject coal-gas poisoning. After pointing out that the products of the burning of gas were no more noxious than the exhalations of human beings, and that really gas illumination did not consume so much oxygen as an equivalent number of wax candles would do, he passed to his main thesis, which was the poisonous action of the gas itself. The escape of gas in a house can be readily and at once detected by its peculiar odor, but it is otherwise when the escape takes place in the ground from breakage of the mains, whence it finds its way into the basements of houses. The evil effects of such escape had been exemplified in Italy, in Cologne, and in Breslau, and he believed that such cases were far more frequent than is supposed. The poisonous property of coal gas depends upon its containing carbonic oxide (viz., ten per cent.), the other constituents, although irrespirable, not acting as direct poisons. From Grube's researches it is evident that the danger of this gas depends not so much upon long exposure to a mixture of air and carbonic oxide, as upon the amount of the latter contained in the air. Air containing a proportion of five parts of carbonic oxide in ten thousand can be breathed for hours and even days by men and animals without any injury to health; whilst a proportion of seven or eight in ten thousand causes appreciable discomfort; of twenty in ten thousand, difficulty of breathing, weakness and uncertainty in gait; twice that proportion leads to stupefaction, and higher proportions to extreme and fatal effects, referable to the nervous system. The occurrence of cases of illness directly attributed to the entrance of gas into houses from the mains has been found to increase in the winter months, a fact partly explained by the more frequent breakage of the pipes in that season, and also perhaps by the closing of windows and artificial heating of rooms, inviting the accumulation and entrance of the gas from without. Gas thus filtered through the soil may be quite odorless, at any rate until it has collected in large amount; and herein lies the danger to the dwellers in the basement of a house. On the earliest occurrence of symptoms such as headache, the windows should be thrown open, and if on their closure the symptoms reappear, it may be suspected that there is an escape of gas near the house. The mains should be examined and the defects repaired without delay; but Professor Pettenkofer urged that it would be well that the police should warn all the inhabitants of houses in the vicinity to see that their rooms were kept thoroughly ventilated. For when the gas remains in the soil it may again find its way into houses when the rooms are artificially heated in the cold season. In conclusion, he remarked that he had chosen this subject for his lecture to show how important it was in hygienic inquiry to pay attention to minutiæ; and he urged that every university should have attached to it a hygienic institute, such as Munich and Leipsic possessed, and as Göttingen was about to have.—*Lancet*, November 10, 1883.

CYSTICERCUS OF THE BREAST.—M. GUERMONPREZ publishes an interesting case of this rare effection in the *Lyon Médical*, of September 16th.

In his *Thèse d'Agregation*, Paris, 1878 (Des tumeurs kystiques de la mamelle), M. Richelot has distinguished glandular cysts, which he calls independent, that is to say, which are developed either at the circumference of, or in the glandular tissue, but which are developed in the mammary glands in the same manner as in the other places.

The patient whose case came under the observation of M. Guermonprez, was twenty-nine years of age, and presented a fluctuating tumor at the upper and internal part of the left breast. Into the inflammatory swelling puncture was made by means of a bistoury in the central part, which caused three different materials to flow out: first a copious amount of thick serum, then a cyst, and finally a considerable amount of pus. The operation was performed on March 25th, and the woman was completely well about the last of April.

The cyst was provided with a single wall, very thin, and could be stretched out on a table, like an incompletely filled bladder. When stretched out it formed a sort of disk, thediameter of which was about one and a half inches; its volume was six cubic centimetres. The color of the pouch and its contents was a greenish-yellow. The surface, generally opalescent, showed at one point a single spot of milky-whiteness with diffuse borders which gradually blended with the rest of the mass. This part, examined by a magnifying glass, showed a vermiform organ, the various parts of which were more or less sheathed in one another. These were separated by methodical compression and teasing. Under the microscope it was easy to recognize all the characters of the cysticercus.—*L' Union Méd.*, October 18, 1883.

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WIRING THE FRACTURED PATELLA.

In *The Lancet* for November 3, 1883, Mr. Lister gives the details of seven cases of fractured patella, in which he was uniformly successful in securing union and a good use of the joint, by approximating the fragments with stout silver wire. The operation is done briefly as follows: A longitudinal incision is made over the patella; firm or soft coagula, or fibrous or ligamentous tissue, are removed; the fragments are freshened, and pierced obliquely with an ordinary bradawl, without penetrating the cartilage; a drain is inserted into the joint; the ends of the wire are secured with a twist, and the latter hammered down upon the bone, with a view to its permanent retention; and the limb, enveloped in an antiseptic dressing, is placed in the trough of Gooch's splint.

Mr. Lister claims that the mode of treatment which he recommends "restores the joint to practically a perfectly natural condition, provided that no disaster occurs," and he warmly urges that it should be pressed upon the patient, if strict antiseptic precautions be carried out, through which accidents will be prevented. He, moreover, states that "we are morally certain that we do not subject the patient to risk," because, "if there is in the whole body a situation which is well adapted for antiseptic treatment, it is this." "I believe," he adds, "that if we use the means that we have now at our disposal, we may say, with a safe conscience, if we use them aright, that we do not subject the patient to anything like so great a risk as people used to be subjected to, not many years ago, when they had fatty tumors removed in general hospitals."

So far as the personal experience of Mr. Lister warrants him in speaking, his successes justify the emphatic language that he employs; but, as we shall show presently, a more extended record of antiseptic suturing of the patella does not confirm his positive assertions. Dogmatism is all very well in its way, but surgeons who occupy the high rank that Mr. Lister does should be very careful in their efforts to inculcate doctrines which are based upon a too limited test. Had he studied the reports of cases in the hands of other surgeons, we feel convinced that he would have been more guarded in his expressions, and would never have penned the words, "Antiseptic treatment converts serious evil into complete safety." It will not do to put forward the excuse for the failures that antiseptic measures were not properly employed, as the operators mentioned in the succeeding paragraphs, in connection with the bad results, are too well known to be accused of negligence.

Antiseptic suturing of the patella has now been done 49 times; the surgeons having been Lister in 7 cases, Koenig in 4 cases, Trendelenburg in 3 cases, Cameron, Jessop, Rose, Rosenbach, Wheelhouse, and Schede, each in 2 cases, and Amphlett, Bell, Bull, Dicken, Fowler, Goering, Hartwich, Holmes, Langenbeck, Langenbuch, Lauenstein, Metzler, Poncet, Sabine, Schneider, Henry Smith, Socin, Teale, Timme, Uhde, Van der Meulen, Wahl, and Wyeth, each in 1 case.

In the single cases of Bull, Dicken, Von Langenbeck, and Wyeth, in Schede's 2 cases, and in 2 of Koenig's, the joint suppurated. Of these 8 examples, that of Bull died of exhaustion on the fourteenth day; that of Von Langenbeck died of pyæmia, after amputation of the thigh, on the sixteenth day; and the case of Wyeth recovered after amputation of the thigh; while the remainder got well with stiff joints, the upper fragment having died in Koenig's fourth case.

In addition to these accidents, there was partial necrosis of the lower fragment in the case of Wahl, and the patient of Fowler perished of carbolic acid poisoning in thirty-one hours.

The results of the operation show, therefore, 16.3 per cent. of suppuration of the knee-joint; 6.12 per cent. of deaths; 4 per cent. of necrosis of the fragments; and 4 per cent. of amputation of the thigh; results which completely negative the dogmatic assertion of Mr. Lister that, "Antiseptic treatment converts serious evil into complete safety." In favor of the operation it must, however, be said that the large majority recovered with bony union and with excellent use of the joint.

From the remarks of Mr. Lister, one would naturally infer that Dr. Cameron, of Glasgow, took the initiative in suturing the broken patella, in 1877. It was, however, first done by Dr. John Rhea Barton, of this city, more than fifty years ago, and repeated by McClellan in 1838, by Cooper, of San Francisco, in 1861, and by Logan, of Sacramento, in 1864. A fourth operation, before the introduction of antiseptic surgery, was performed by Gunn, of Chicago. Of the four, those of Barton and Gunn perished.

HYSTERICAL FEVER.

Dr. Briand, in a recent number of the *Gazette Hebdomadaire*, maintains, with Gubler, Rigál, Dieulafoy, and others, that the term hysterical fever should be applied to certain conditions of actual fever which cannot be referred to any other cause than the hysterical affection itself. Three forms are described: 1. The slow continued fever of Briquet, characterized sometimes by a simple acceleration of the pulse, *without elevation of temperature*, sometimes by a temperature rise, either without other phenomena or accompanied by headache, thirst, and other symptoms. 2. A shorter form, always the result of a more or less active disturbance of the nervous system by terror, fear, chagrin, and like causes, occurs in well-marked neuropathic subjects. Examples of this variety have been described by Graves, Briquet, and Bouchut; and the following typical case is related: A young girl after intense fright, was seized with severe fever which lasted ten days, and in which the temperature reached 103.1° F. Sudden defervescence ushered in a series of phenomena characteristic of hysteria. 3. The febrile phenomena sometimes assume the intermittent form. In three examples of this variety, Briand observed respectively temperatures of 100.6° F., of 100° F., and of 100.2° F., and in a single case reported by Charcot, the temperature attained 101.3° F.

On the other hand, M. Henry Pinard, in a thesis presented this year to the Paris Faculty, without denying absolutely the occurrence of a true hysterical fever, describes the so-called intermittent variety as a pseudo-fever, at the same time declaring that the first and second of the above forms have no existence whatever as direct manifestations of hysteria.

This view, in which we concur, accords more closely than the other with the known facts concerning hysteria. That febrile phenomena should occasionally occur as secondary to hysterical outbreaks, in consequence of violent and prolonged muscular effort, or of local injuries, is altogether probable. That intercurrent affections, such as enteric or intermittent fever occurring in hysterical subjects, present peculiar modifications is well known. But that febrile conditions resembling these affections are the direct outcome of hysteria is far from being established. A much greater collection of closely observed cases, in which accidental and intercurrent febrile manifestations have been rigidly excluded, than has yet been made, would be needed to give any sanction of right to the use of the term, hysterical fever.

THE REMOVAL OF NEOPLASMS OF THE BLADDER.

In The Medical News for August 11, 1883, we directed attention to the operative treatment of tumors of the bladder, and showed that, in view of the dangerous condition to which the subjects are reduced, their removal was perfectly justifiable. We also protested against the exclusive use of the forceps, as recommended by a distinguished London specialist, which are not only almost worthless except for pedunculated growths, but the resort to which is attended with the risk of lacerating the bladder. For these reasons we advised the employment of the sharp spoon, with which the base of the neoplasm can be successfully attacked.

In *The Lancet* for October 6, 13, and 20, will be found a series of papers from the pen of Mr. Walter Whitehead, of Manchester, in which the details of six cases are given, which confirm the views we expressed in regard to scraping away vesical neoplasms. In five the spoon was employed, and all the patients, of whom four were males and two were females, recovered from the immediate effects of the operation. Four recovered completely, while two died, each at the expiration of three months. In one the growth had been completely removed, and the bladder was perfectly healthy; while in the second case, in which the papillated surface of an epithelioma behind the pubes was scraped away with the fingernail, there was no return of spontaneous hemorrhage.

THE MICROCOCCUS OF SCARLET FEVER.

M. Pohn-Pincus, in the *Gazette Médicale de Paris* of Sept. 29, states his belief that he has discovered, in the desquamating epidermis of scarlet fever, micrococci which are the germs of this disease. He demonstrates them by partially detaching with scissors a lamella of the epidermis, but so that it shall be still adherent by a great part of its periphery. He then applies to the under surface of the detached portion a few drops of a saturated alcoholic solution of methyl-violet. In a few minutes he scrapes off, with the aid of a cataract needle, some little fragments of tissue, and immerses them for a short time in distilled water; subsequently he places them upon a glass slide, teases them out as finely as possible with needles, and warms the object glass until the preparation is dry. He then adds a drop of oil of cloves, and covers the whole with Canada balsam.

The micrococci will be stained violet. M. Pohn-Pincus says their dimensions are very small, but measurements are not given. They are united in small groups and are found in the depressions upon the borders of the detached cells. No attempt has yet been made to cultivate these micro-organisms or to inoculate them.

PREVENTIVE INOCULATION OF SCARLATINA WITH SCARLATINAL VIRUS DERIVED FROM A HORSE.

In the *Gazette Médicale de Paris* of Sept. 29th, M. Stickler reports the result of some inoculations with nasal mucus of a horse suffering with an affection which was believed to be identical with human scarlatina.

M. Stickler inserted about six drops of this mucus under the skin of four rabbits and a dog. Twenty-four hours later, these animals presented a decidedly confluent scarlatiniform exanthem, which terminated in four days in a lamelliform desquamation. This eruption was accompanied with fever, anorexia, and redness of the nasal mucous membrane, which was also the seat of an abundant secretion. In the neighborhood of the inoculation, the glands were engorged. At the end of eight days the animals had recovered. The daily examination of the blood showed an increased number of leucocytes, and, on the third day, were noted little rounded distinct granules adherent to the white globules; these had disappeared on the sixth day. Seven days later, he injected under the skin of the same animals blood from a case of confluent scarlatina, and the inoculation was followed by no results.

Again, he inoculated with the same nasal mucus twelve children who had never had scarlet fever. In all of these children a punctiform eruption appeared within twenty-four hours at the point of inoculations, accompanied with fever and enlargement of neighboring glands. The eruption lasted six days, and terminated in desquamation. After an interval of a few days, he inoculated the same children with some drops of scarlatinal blood, with absolutely negative results.

M. Stickler concludes from these experiments that the subcutaneous injection of scarlatinal virus derived from a horse is not followed by harmful results; that inoculation of this virus in man is followed by a circumscribed eruption like that observed in mild scarlet fever; and that this inoculation confers an immunity against scarlatina.

CREASOTE IN PULMONARY AFFECTIONS.

In the *Journal de Thérapeutique* for September 25, 1883, Dr. Reuss publishes some remarkable statistics, proving the great value of creasote in phthisis, and in acute affections of the respiratory organs after the active symptoms have subsided. In chronic bronchitis, in humid catarrh, and in the after-stage of acute bronchitis, he has had the most fortunate results, but his statistics show that in phthisis the most surprising success has been obtained. Thus, in his last series of 60 cases of tuberculosis, there were 25 cases of apparent cure, 20 of these being in the first stage and 5 in the second, but none in the third. The improved were 20 in number, and of these 3 were in the first stage, and 17 in the second stage of the disease. He cites, in the course of the paper, several cases in illustration of his statistical data.

Creasote is administered in pill with balsam of tolu. He gives it for months without interruption in the dose of 40 to 50 centigrammes a day, or 5 to 8 grains. He conjoins the use of tonic medicines and arsenic, the latter especially being very useful, but attributes the disappearance of the pulmonary diseases to the creasote, maintaining that there is a regression, merely, of tuberculosis—an apparent cure—and that the patient is liable to relapses.

What is the mode of action? Dr. Reuss is disposed to attribute the curative effect of his combination of creasote and balsam of tolu to the cicatrizing and desiccating effect of the former and the balsamic and respiratory properties of the latter. If, however, phthisis is a parasitic disease, the effect of creasote may be referred to its action on the microbe of tubercle.

A NEW SYMPTOM OF FATTY INFILTRATION OF THE LIVER.

Lepine and Eymonnet have recently communicated to the Society of Medical Sciences, of Lyons, a new symptom of fatty degeneration of the liver. If urine be freed from its phosphates by a magnesian mixture or baryta, evaporated, and the residue ignited with nitrate of potassium and treated with acidulated water, the solution will contain traces of phosphoric acid. This is derived from the glycerin-phosphoric acid contained in normal urine, and is a constituent of lecithin. In several cases of fatty liver, these observers found this secondary phosphoric acid increased five to tenfold, which is in accord with the fact that a considerable quantity of lecithin, as much as three per cent., is found in fatty liver.

THE NEW SURGEON-GENERAL U. S. ARMY.

After an unusually long delay The President has appointed as Surgeon-General U. S. Army, to fill the vacancy created by the death of General Crane, Dr. Robert Murray, the Senior Medical Officer of the Corps.

Dr. Murray is a native of Maryland, and having been born in August, 1822, has yet a little over two and a half years to serve before reaching sixty-four years, the age of compulsory retirement. He was appointed Assistant Surgeon U. S. Army in 1846, and after a few months' service at Fort Geatint, Michigan, was transferred to California, where he served successively at Los Angelos, Monterey, and Camp Far West, until the fall of 1850. He then served at Fort Independence, Boston, and in New York City, until April, 1854, when he went to California. He was commissioned Surgeon United States Army, June, 1860. During the war he was Medical Director and Purveyor of the Department of the Cumberland until 1862, and then Medical Purveyor at Philadelphia until 1865, Medical Purveyor Military Division of the Pacific, San Francisco. Lieutenant-Colonel and Assistant Medical Purveyor U. S. Army, July, 1866. Was brevetted Lieutenant-Colonel and Colonel U. S. Army, for faithful and meritorious services during the war. Medical Purveyor at San Francisco, Cal., September 30, 1865 (commissioned Assistant Medical Purveyor, U. S. Army, July 28, 1866), to March 13, 1877. On duty at San Francisco, Cal., examining quality and condition of medical supplies at Purveying Depot, and awaiting orders March 13, 1877, to January 2, 1878.

Medical Director, Division of the Missouri, January 2, 1878 to September 4, 1882. Medical Director, Division of the Atlantic and Department of the East, September 7, 1882, to present date.

This appointment creates a vacancy in the office of Assistant Surgeon-General, which by regular promotion, will be filled by the appointment of Col. Charles Sutherland, Surgeon U. S. A.

POISONOUS PAPERS IN THE KINDERGARTEN.

IN the issue of THE MEDICAL NEWS for March 24th we called attention to the danger arising from the use of arsenical papers in the kindergarten. We are gratified to learn as the result of this, and of the consequent agitation of the matter, both here and in Boston, that these kindergarten papers can now be had free from all poisonous properties.

The trouble seems to be further back than the manufacturers of the papers, and exists with the color-makers. Colors even guaranteed by the makers to be free from arsenic were found to be largely made up of that poison, and many colors heretofore harmless are now being made from arsenic. Both greens and reds, and even blues, purples, and other colors are now very frequently arsenical to such an extent as to be very dangerous.

So true is this of wall papers, that we would advise having all such papers tested by a competent chemist before having them hung.

We are very glad to learn that through the efforts of one of the makers of kindergarten papers, Messrs. Milton Bradley & Co., of Springfield, Mass., all their poisonous papers have been replaced by harmless ones. They guarantee them absolutely pure, and analyses made by Prof. Henry Leffman have demonstrated the correctness of their statements. In this city these papers can be had of the Friends' Book Association, 1020 Arch Street. We strongly advise kindergartens not to use papers that have not been previously tested and found free from arsenic. This is a matter which concerns every parent, and we trust that the daily press will call attention to the risks run by kindergarten children from this cause, and the ready method by which they may be avoided.

MEDICAL REFORM.

THE practical tendency of New Code medical reform is illustrated in the contribution to the columns of a New York contemporary, of a letter from a Thompsonian "Professor" of Cincinnati, who advocates a State Board of Examiners, and a high standard of acquirement. The medical college in which this botanical or steam doctor exercises his professorial privileges, is a "chartered institution" and as legal as the best of them, and is surpassed by none in the liberality of its teachings and in the elasticity of its requirements for graduation. They are for reform in the Physio-Medical College of Cincinnati. They are opposed to all restrictions on consultations, and hence approve of the New York Code, and that free trade in medicine which is limited only to chartered institutions and legalized practitioners. They favor a State Board of Examiners in the interests of a higher medical education, and, secure in the learning of the Thompsonian school, they simply require as a condition of their acceptance of the proposed scheme that the Examiners shall be representative men of the steam system. They, too, wish that the requirements for admission to the medical profession be of the loftiest description—that those who aspire to begin the study shall be able to read the Constitution, cipher as far as the "rule of three," and translate *E Pluribus Unum*, and that those admitted to graduation shall have attended a six week's term in the Physio-Medical College, in the course of which they learn the "sanative" virtues of lobelia, the composition of "number six," and the horrors of "calamy" and "old-school" physic.

The "Physio-Medicalists" are for the New Code and reform. They have taken the field against old-school fanaticism and intolerance. They have taken their stand by the side of our New York contemporary and reform. The world is tired of old physic, and clamors for the new—the Physio-Medical comes to the front. The effete institutions under "allopathic" control must conform to the spirit of the age, and adopt the steam-box, lobelia, and "number six!"

The Medical Record takes exception at the figures put forth by the Central Organization of the New York State Medical Association to uphold the National Code of Ethics, and endeavors to throw discredit upon them. Then, assuming a reversal of the figures to be correct, it asks "will a minority of the profession continue to try and force upon the majority the enactment of a disciplinary by-law, which accomplished nothing but to lower the physician in public esteem?"

REVIEWS.

A MANUAL OF AUSCULTATION AND PERCUSSION; EMBRACING THE PHYSICAL DIAGNOSIS OF DISEASES OF THE LUNGS AND HEART, AND OF THORACIC ANEURISM. By AUSTIN FLINT, M.D., etc. Third edition, revised. 8vo. pp. 242. Philadelphia: Henry C. Lea's Son & Co., 1883.

THAT a new edition of this useful little work has so soon come before us, is a hopeful sign of the times. The last generation of practitioners to whom physical diagnosis was a new-fangled art, rests from its labors. To the doctor of to-day, percussion and auscultation are essential, and their acquirement has become a necessary part of his training. To this state of affairs no worker living has contributed so much as Austin Flint. The light kindled by Auenbrugger, and handed on by Piorry, Laennec, Skoda, Wintrich, Williams, he caught and tended till its radiance not only lights up our western world, but is reflected back to the old world whence it came. Out of confusion he has by his analytical method brought clearness, and many signs that at one time served merely as subjects for learned and often pointless discussion, he has made available to the every-day practitioner for the diagnosis of disease. In the present edition the changes are few and for the most part of the nature of further illustration of difficult points. The modes by which pulmonary signs may be reproduced in the lungs removed from the body and by artificial means, are among them.

THE ESSENTIALS OF BANDAGING, ETC. By BERKELEY HILL, M.B., London, F.R.C.S. Fifth Edition. New York: J. H. Vail & Co.

THE first section of this work which treats of the subject of bandaging, is one which probably to the American reader will seem most incomplete, for we notice the absence of many useful and ingenious bandages which are very generally used by surgeons on this side of the Atlantic.

This defect is not so noticeable in the next section which treats of fracture dressings, for here many American methods of treatment are described at length.

The use of plaster of Paris in the treatment of fractures, and the use of Sayre's plaster jacket in Pott's disease of the spine, receive each an extended notice.

The various surgical procedures such as venesection, transfusion, introduction of catheters and bougies, plugging the nares, etc., are clearly and briefly described, and in many cases well illustrated. In discussing the subject of anæsthetics, p. 222, the author makes a statement in regard to the general safety of chloroform from which we must strongly dissent. One of the most interesting and instructive chapters in the work is that treating of surgical landmarks; this of itself would be sufficient to recommend the work to a most favorable notice. The book contains so much valuable information that we can readily understand the favorable reception with which it has met at the hands of the medical profession and students which has necessitated the appearance of this, its fifth edition.

BURR'S INDEX TO MEDICAL SUBJECTS. Adapted to the Special Use of Physicians and Surgeons. Manufactured by the Burr Index Company, Hartford, Conn.

THE *Medical Index*, manufactured by the Burr Index Company, of Hartford, Conn., is by far the most convenient and valuable work of the kind that we have ever seen. The different amounts of spacing under the same letter are most judiciously arranged; all words entered are indexed by the first two letters; and the references are rendered especially easy by notches cut in the edges of the leaves, through which, when the index is opened at any letter of the alphabet, the combinations of each letter appear in full. The projecting alphabet, printed in golden letters on morocco leather, moreover, greatly facilitates the finding of the location of the headings, as it does away with the necessity of turning over the leaves. From the short trial that we have made of it, we have no hesitation in declaring that it admirably fills a need that we have long felt.

SOCIETY PROCEEDINGS.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

Stated Meeting, November 7, 1883.

THE PRESIDENT, ALFRED STILLÉ, M.D., IN THE CHAIR.

DR. ROBERTS BARTHOLOW read a paper entitled

ENTERIC PARAPLEGIA.

By the term enteric paraplegia, he said, I intend to express the conception of a spinal paralysis, produced by an intestinal disorder. It is a truly reflex paralysis. The fact of the existence of such a malady is denied by many, and indeed most of the reported examples will not bear careful inspection, for it will be found, as I shall show, that they are really cases of ascending neuritis. Eliminating such from the examples of true reflex paraplegia to be found recorded, I intend to place the latter in a special group composed of cases presenting the symptoms of an enteric disease, during the course of which, a motor and sensory paraplegia manifests itself, and pursues a course obviously dependent on the original lesions. The cases I have lately seen occurred in men over sixty years of age, and each one presented a morbid complexus so distinctive and uniform as to entitle it to be regarded as a substantive affection—a pathological entity. Although such cases have been described as examples of reflex paralysis, they have not been adequately differentiated from others similarly classified, but of different nature.

Before attempting the task of analysis and differentiation, I must give a brief outline of three cases, the most recent which have come under my observation.

Case I.—Mr. R., æt. 64, merchant and banker, of very vigorous and robust frame, rather spare and bony in outline, but capable of great endurance, called on me a year ago, amongst other physicians of this city, for relief to an obstinate bowel affection. His story was this: for a year or more previously he had suffered with intestinal indigestion, colicky pains, flatulence, and considerable depression of spirits. Soon after these symptoms were experienced, he began to have pain in the back, with more or less band-like constriction of the abdomen, a feeling of numbness in the feet and legs, a strong sense of fatigue in the inferior extremities, followed by weakness and awkwardness of movements in walking, obstinate constipation, and slowness in the emission of urine. For the relief of these alarming symptoms he consulted an eminent practitioner of this city, who diagnosticated myelitis and advised cups, the moxa, and a pill which probably contained ergot. Without using any of the local applications, Mr. R. took the pills, which had a favorable effect in relieving the flatulence and constipation, but presently dysenteric attacks supervened, and then a remarkable change ensued in the spinal symptoms. Up to this period, the paraplegia had steadily increased, and walking had become exceedingly difficult, but the change in the condition of the intestine, effected a revolution in the state of the spinal functions, and in the course of a few weeks, all the paralytic symptoms had disappeared. Still troubled with intestinal indigestion, Mr. R. finally consulted me amongst others, when I learned the details of the case just given. Very recently I have heard that Mr. R. continues free from the spinal symptoms, and has in the main got rid of his intestinal disorder.

Case II.—Mr. P., a tall, thin, but hardy Quaker farmer, æt. 72. I saw the patient at his home, near Delta, York Co., this State, in consultation with Dr. Hickman, a very intelligent practitioner living there. I learned that the patient some ten years before had experienced a similar attack, but had recovered rather suddenly under the influence of some remedies which were then prescribed. For some years, he remained comparatively free from disorders of digestion. The present attack came on during the past winter; at first there appeared a very considerable disturbance of digestion—acidity, pyrosis, flatulence, and colicky pains. The distress was increased by taking food, and apparently attained its maximum when the alimentary materials entered the intestines. In fact, the symptoms of intestinal indigestion were the most pronounced throughout, and to these were added obstinate constipation, the stool consisting of balls united by masses of mucus, or coated with the same. Very soon after the gastro-intestinal catarrh was established, Mr. P. began to experience numbness of the feet and legs, and an increasing difficulty of locomotion.

At the time of my visit with Dr. Hickman, the patient was nearly entirely disabled. The history of very severe and continuous digestive troubles was repeated. I will, therefore, to occupy as little time as possible, pass on to the objective examination of the paraplegia.

He could not stand without assistance; there was an extreme degree of ataxia; the muscles were so weak that his utmost efforts could not at all hinder slight movement of extension when the legs were flexed on the thigh; the tactile sense was so lowered that the points of the æsthesiometer could not be felt at all; the muscles responded feebly to an induction current; the emission of urine was very slow, and there was much dribbling afterwards, and the bowels were extremely sluggish. There was a feeble knee-jerk.

With attention directed entirely to the digestive trouble, beginning with an exclusive milk diet, in two weeks a marked improvement was manifest in all the symptoms, the paraplegia disappearing. In a letter recently received from Dr. Hickman, I learn, that after a period of very great improvement, Mr. P. began to decline in strength, owing to failure of the functions concerned in nutrition.

Case III.—Mr. McK., of Clearfield Co., about sixty years of age, has had for many years frequent attacks of sick-headache. Within the past year, pronounced symptoms of intestinal indigestion, pain of a colicky character, flatulence, and irregular action of the bowels, etc., have come on; but the symptom which has caused the greatest apprehension, and on account of which, more especially, he has called on me, is an increasing numbness with some diminution of power of the inferior extremities. The tactile, pain, and temperature senses, are not abolished, only slightly impaired, and the tendon reflex is unaffected. A feeling of fatigue, of weight and heaviness is felt in the legs, but locomotion is not as yet much affected. I await further developments in the symptoms referable to the nervous system, but meanwhile treatment is directed to the gastro-intestinal disorder.

Cases similar to those which I have thus briefly outlined, have been recorded by various observers. An admirable example, and one of the first of its kind, was narrated by that eminent clinician, Graves, of Dublin (*Clinical Medicine*, edition by Neligan, vol. i. p. 558). In this case extreme gastric disturbance, with less important intestinal, came on in distinct paroxysms, varying in duration from several days to two or three weeks, and accompanied by complete motor paraplegia. For a time, entire recovery took place, the paralysis disappearing with the cessation of the other symptoms. Finally the attacks grew so frequent as to be almost continuous, and death ensued from exhaustion. The minutest examination failed to disclose a lesion in any organ of the body. With the advance in our means of investigating morbid states, such cases of presumed functional disease of the nervous system are becoming more and more rare. That there is a condition of reflex paraplegia, due to anæmia of the cord, is a postulate I expect to maintain. That there is, however, a so-called reflex paraplegia connected with diseases of the gastro-intestinal and genito-urinary tracts, which is not truly reflex, is another postulate that I believe to be susceptible of demonstration.

There was a period, in England more especially, when the notion of reflex paraplegia secondary to intestinal, renal, and genital disease, was widely entertained. The cases first reported by Stanley (*Medico-Chirurgical Transactions*, vol. xviii. p. 260), Brodie (*Lectures on Urinary Organs*, p. 115), Stokes (*Practice of Medicine, Treatment of Nervous Diseases*), Graves, and others, were supplemented by the striking narratives of Gull (*Guy's Hospital Reports*, various papers). Then Brown-Séquard (*Lectures on Paralysis, etc.*, 1861) gave a scientific explanation of the mechanism, referring the paralysis to vaso-motor action. It must be admitted, nevertheless, that the doctrine of a reflex paralysis has not maintained the position it once had. In no modern work is the subject treated with the extent and gravity befitting an important disease.

The two postulates I purpose to sustain, are:

1. That there is a reflex paraplegia due to a functional disturbance of the intestine—enteric paraplegia.
2. That there is a paraplegia having its initial seat in the end-organs of the nerves distributed to the mucous membrane, thence ascending to the cord by a progressive neuritis.

As respects the first postulate, the cases I have narrated, and many others on record, demonstrate a causal connection between the enteric disorder and the spinal. That the paraplegia is functional is proved by its prompt cessation when the cause is removed. One of the means of determining whether a given paraplegia is due to a myelitis, or to mere anæmia—that is, functional—is the subcutaneous injection of strychnine. At a late meeting of the American Neurological Association, Dr. Jewell, of Chicago, recounted his experiences with considerable doses of strychnine in cases of paraplegia, which improved so remarkably that they must have belonged to the merely functional group. It is in a high degree probable that cases of merely reflex paraplegia—of enteric paraplegia—especially as they occur in aged subjects, are relatively frequent, and happen from a degree of intestinal disturbance that seems a mere accident of the morbid complexus.

What is the mechanism? We are helped in our consideration of this question by physiological data. Kussmaul and Tenner (quoted by Erb), have shown that sufficient loss of blood will cause paraplegia. Tying the abdominal aorta, and its obstruction by disease—of which Gull (*Guy's Hospital Reports*, 1858, p. 311) has given a striking example—embolic blocking of the spinal vessels, as Panum (*Virchow's Archiv*, Band xxv.) has experimentally demonstrated, and large uterine hemorrhage as Moutard-Martin (*L'Union Médicale*, 1852) has shown, have alike stopped the spinal cord functioning. In other words, an insufficient blood supply—an anæmia—is a cause of paraplegia. Brown Séquard in his *Lectures*, published in 1861, maintained the thesis that a strong contraction of the vessels of the cord induced by reflex stimulation is the essential condition in reflex paraplegia. We should not lose sight, in this connection, of the degree of stimulation necessary. A moderate degree of intestinal irritation suffices—for the law of reflex contraction of the vaso-motor fibres may be formulated thus: irritation of the end-organs of the sensory nerves, not too violent and long continued, stimulates the vaso-motor centre in the medulla, and causes a general contraction of the arterioles; but excessive and protracted irritation depresses the vaso-motor centre and relaxes the vessels. It seems probable that an ordinary intestinal indigestion and the stretching of the nerve fibres produced by retained gas, is a degree of irritation sufficient to produce the supposed effect. To the further elucidation of the mechanism of enteric paraplegia, it is necessary to recall the fact that the blood pressure in the vessels of the intra-abdominal organs rises and falls within considerable limits in quite an independent manner, controlled, doubtless by the same ganglia that regulate the calibre of the intra-spinal bloodvessels.

The circulation within the spinal canal is peculiar, in that the veins bear such a disproportionate volume to the arteries, and that the whole vascular supply is in a certain sense a diverticulum. Atheroma of the vessels will contribute to the result of reflex irritation, and hence it is that paraplegia has resulted from endarteritis of the spinal vessels.

The second postulate, is that the paraplegia which succeeds to certain cases of enteric, renal, or genital disease, is due to an ascending neuritis. Chronic dysentery, pyelitis, and vesical catarrh, are affections during the course of which the spinal cord has become diseased. Lesions of continuity involving the terminal nerves in structural changes, are necessary to the production of this effect. The part which ascending neuritis may play in causing anatomical alterations of the spinal cord, is exhaustively shown by Friedreich in his monumental work on progressive muscular atrophy (*Ueber progressive Muskelatrophie, über wahre und falsche Muskelhypertrophie*, Berlin, 1873, Hirschwald). Whether we accept his conclusions or deny them, we cannot withhold the full measure of admiration for his labors. Starting with the theory of an intramuscular neuritis, Friedreich holds that by an extension of this affection upwards, the cord is ultimately reached, and the changes belonging to progressive muscular atrophy are wrought. The intramuscular neuritis admitted, the rest may easily follow. Under the term "Chronic Ascending Neuritis," Dumenil has described the changes in injured nerves which, caused by trauma, proceed from the point of injury up to and involve the cord. Vulpian has especially demonstrated the modifications produced in the spinal cord, by the section of a principal nerve in a member, usually the sciatic (*Archives de Physiologie Normale et Pathologique*, No. 3, 1868, p. 443). The nerves of a limb amputated, as Dickinson has especially shown, undergo degenerative atrophy, and that part of the spinal cord in anatomical connection therewith, also atrophies. Many other observations might be quoted, but these will suffice to show how changes in the cord follow injuries to peripheral nerves.

In paraplegia secondary to ulceration of the mucous membrane, we can readily, I think, conceive of a lesion of the peripheral nerves and an ascending neuritis to which the succeeding changes are due. It follows that such cases require a very different prognosis from those of simple reflex paralysis. The course and termination of the latter are affected by the causal lesions, whilst the former pursue a steadily unfavorable direction from the beginning of the spinal symptoms. The differentiation of reflex from secondary paraplegia is made by attention to the following points:

Reflex paraplegia is sudden in its onset, or, at least, develops quickly; secondary paraplegia is gradual in its evolution; the former is soon complete in all points of its symptomatology; the latter attacks one spinal function at a time. Reflex paraplegia follows the fortunes of the producing malady; secondary paraplegia pursues an independent course, and when the alterations begin in the spinal elements, they proceed in their own way, just as after amputation of a limb, the changes in the cord go on in the associated nerve fibres, or as in Landry's ascending paralysis, the lesions proceed by contiguity of tissue. Reflex paraplegia, of and by itself, never proves fatal, nor does it inflict permanent damage; secondary paraplegia may be the cause of death, and if not fatal, effects lasting mischief.

To this view of reflex paraplegia it may be objected, that extreme variations in the vascular supply must ultimately lead to structural changes. This is certainly possible, but the spinal, like the cerebral circulation, is arranged to permit considerable variations in the amount of blood.

It remains to explain, if an explanation be possible, why intestinal or renal lesions may in one case produce a merely reflex disturbance, and in another, set up an ascending neuritis. There are, probably, two reasons: 1st. The depth and extent of the peripheric lesions. 2d. An inherent susceptibility to degenerative changes in the nervous elements. The first to me has profound significance, and I have already alluded to it. A degree of peripheric irritation not too great, will merely stimulate the vaso-motor centres, and cause anæmia of the cord by tonic contraction of its vessels, but when the lesions of the mucous membrane are of a destructive kind, depression of the trophic centres, as well as of the vaso-motor, ensues. That there is a neuropathic type of constitution, in which the nerve-tissues are peculiarly prone to take on morbid changes is an indisputable fact. When the two influences coincide the result is not doubtful.

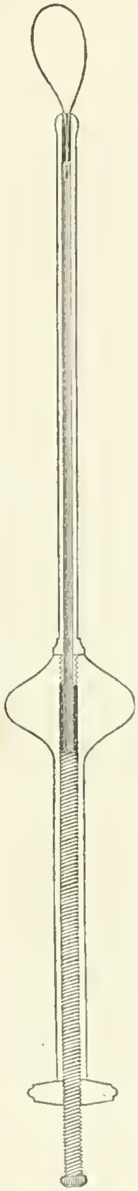
I must, then, conclude that there is a malady which may properly be entitled *Enteric Paraplegia.*

NEW INVENTIONS.

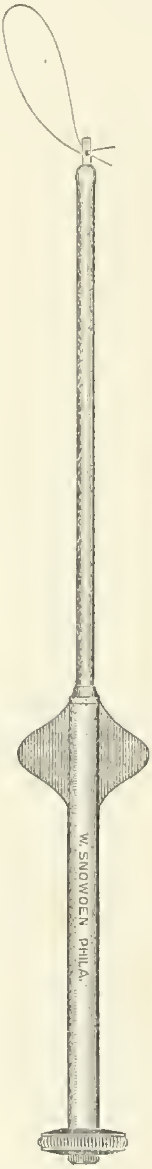
A NEW WIRE SNARE ÉCRASEUR.

By CHAS. E. SAJOUS, M. D.,
INSTRUCTOR IN LARYNGOLOGY IN THE POST-GRADUATE COURSE, JEFFERSON MEDICAL COLLEGE, ETC.

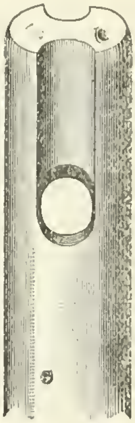
The accompanying cuts represent an instrument which I have had constructed for the extirpation of intra-nasal growths. While possessing all the merits of other wire écraseurs, it has the advantage of being much less complicated, and consequently easier of manipulation. It consists of five pieces: two cylindrical tubes, two rods, and a milled-nut.



Longitudinal section of instrument.



Its external appearanee.



Magnified end of needle-rod.

The two tubes are made of steel and of different sizes. The narrower one, or end-piece, is 4 inches long and $\frac{1}{12}$ inch in diameter, and is threaded at one end to fit tightly in that of the second or larger tube. This is only 3 inches in length and $\frac{1}{6}$ inch in diameter. The two rods are also of different sizes, their diameters allowing their introduction into the tubes, the cavities of which they fill, and along which they can move freely. The end-rod, about the thickness of a crochet-needle, is $\frac{1}{8}$ inch longer than the narrow tube and protrudes through it. Its end is furnished with an egg-shaped needle-eye. The other end is threaded to fit in that of the larger rod, which is also $\frac{1}{8}$ inch longer than the tube containing it, and threaded throughout its entire length for the movement over its surface of a milled-nut. This nut lies in close apposition to the posterior end of the large tube, and when revolved from left to right, causes the rods to descend. Near the middle of the instrument is a ribbed finger-rest to insure the operator a firm hold. Rotation of the rods in the tubes is prevented by a ridge in, and at the end of the larger tube, corresponding with a narrow, flattened, longitudinal surface on the threaded rod.

In other instruments, the wire has to be passed throughout the entire extent of the tubes and attached either to rings, pins, etc., or whatever the inventor may have thought best, a rather lengthly and sometimes difficult procedure, especially if the inside of the instrument be a little rusty. In that introduced in this paper, but a small piece of wire is needed, say two or three inches, as the case may be; this is doubled into a loop, and the ends passed through the eye until they protrude about a quarter of an inch. Traction being then caused by turning the milled-nut, the end of the rod will disappear in the tube, doubling the wire ends on the loop. As shown in the annexed cut, representing the end of rod as seen through a lens, a shallow groove connects the needle-eye with the tip of the rod on each side. When traction is induced, the ends on one side, and the apex of the loop on the other, half fill these grooves, and the pressure exerted by the surrounding tube holds them as tightly as in a vise. The edge of the needle-eye is rounded and smooth so as to avoid a too sharp bend in the wire, which would cause it to break. For operations in the pharyngeal vault, there is a curved end which can be attached to the narrow tube and held there by a self-acting spring.

Besides the simplicity of its construction, this instrument presents advantages which I think it advisable to enumerate:

1st. It is strong as well as light, and its different parts can readily be separated for cleansing.

2d. The wire can be attached in a moment and as rapidly withdrawn.

3d. The loop being close to its point of attachment, it is not liable to twist on its axis.

4th. The loop being at one end, the milled-nut at the other, and the point of support in the centre, it is evenly balanced.

5th. The milled-nut being immovable longitudinally, its rotation does not involve lateral motion of the operator's arm, thereby avoiding pressure of the point of the instrument against the tumor.

While being especially adapted to intra-nasal operations, extirpation of polypi, hypertrophic thickenings of the nasal mucous membrane, adenoid vegetations of the pharyngeal vault, etc., it seems to me that it could be used with advantage in gynecology, aural surgery, and all operations in which an écraseur would be indicated.

NEWS ITEMS.

ST. LOUIS.

(From our Special Correspondent.)

The St. Louis Medical Society and the Ethics of its Members.—The antiseptic spray has been turned on by the Medical Society, and a thorough cleansing process is undertaken, or at least attempted. Erratic brethren exist in the Medical Society of St. Louis as they do in the societies of all other cities, neither more nor less; and though pledged to obey the laws of the Society, as well as the Code of Ethics which governs all, they seek their own path, apart from the trudging masses, for the sake of making a short cut, or of enjoying a more pleasant voyage than they anticipate on the hard high road. The indulgent and kindly spirit which governs the profession, forces them to wink at this proceeding and ignore it unless the independent brother strays too far away.

The unusually cool and pleasant summer which we have enjoyed, has obviated the necessity of the usual vacation which takes place in the meetings of the Society, and fresh in body and mind the fall meetings have been entered upon with unusual activity and interest. Unwillingly, but most necessarily, has the attention of the Society been directed to certain professional irregularities existing here, as they do everywhere, and ignored unless they become so public and excessive as to injure the profession by the odium attached to any one of its members. It is not a local matter merely, as similar conditions exist in many other Societies, and those members of the profession who make an effort in the right direction, taking upon themselves the often unpleasant task of upholding the dignity of their calling, should have the hearty support of their brethren throughout the land.

Certain of the physicians of this city have come into remarkable notoriety of late; and the St. Louis Medical Society was first aroused to action by the doings of a man, indeed, a regular graduate and member of the Society, who has been repeatedly arraigned before the court of criminal correction for the crime of abortion, and who has now been expelled from the Society for other irregular performances. This innocent has sued the committee who recommended his expulsion, for fifty thousand dollars damages, as an appropriate equivalent for the injury done to his character.

MEDICAL ADVERTISING.—The subject of ethics has brought up for consideration minor matters. Thus the circular sent out by an enterprising young member, who some years ago was reprimanded by the Society, and would have been expelled had the opinion not prevailed that no such power was vested in the organization, by reason of a verdict of a court many years ago, which had reinstated a member thus expelled. The gentleman now before the house had issued a circular in recommendation of a new enterprise upon which he had entered; although the circular shown was received by a layman, the author claims to have sent them to the profession only. Urged by the Society, upon recommendation of its committee on ethics, to withdraw said circular, he resigned, and was permitted to do so. His claims of having merely announced his institution to the profession, and the consequent action of the Society, make it appear to those ignorant of the details that he is a sadly persecuted individual. Some of the daily papers have even represented him as such: as an independent man suffering from the restrictions of an antiquated Code. Were the terms of the circular known, which come as near guaranteeing a cure by operation as can well be done, the public and the profession would think otherwise. The gentleman justly claims that he cannot, without advertising, successfully compete with older institutions, forgetful of the fact that such older institutions are the result of the hard work of earnest men throughout long years—perhaps the work of a lifetime, and have by fair means won the esteem of the public, which learns to know the merits of men and institutions without the aid of circulars or daily papers.

Quite a number of gentlemen, seeing the course taken by the Society, followed with their resignations, unwilling to give up the advertisement of their specialties; even that of a member of the committee on ethics was presented, as he seems disinclined that his advertisement for the cure of consumption should come before the Society. All this is advertising *not* accord- to the Code. Other advertisements (in accordance with the Code?) have not been considered, such as those of the schools, or of the professors of colleges, who certify to the harmlessness of "Horse-shoe" tobacco, or the certificates which accompany the recommendations of various medicinal preparations, attested to by men of prominence and otherwise throughout the country, their positions and specialties carefully appended to their names.

This is a question which has been before the profession before, as we may see by the action taken by the American Medical Association in 1868, where a committee was appointed to report on the subject of specialties in medicine, and the propriety of specialists advertising. Four resolutions were then passed: 1. Specialties are legitimate fields of practice. 2. That specialists shall be governed by the same rules of professional etiquette as all other physicians. 3. That it shall not be proper for specialists publicly to advertise themselves as such. 4. That private hand-bills, addressed to members of the medical profession, or cards in medical journals calling attention to themselves as specialists, be declared to be a violation of the Code of Ethics; though it is proper for a physician to announce that his practice is limited to a certain disease or diseases, "that such is simply a note of limitation, but involves no other principle than the notice of the general practitioner, that he limits his business to certain hours of the day; neither would it be regarded as a claim for especial qualifications."

These matters will now assume greater importance and publicity, as specialists and specialties are becoming more numerous; and the beginner or the unsuccessful specialist, jealous of the success of his more able or more fortunate colleague, seeks by public prints or circulars, and cards in the daily papers, to bring himself into that notice which the other has acquired by patient labor of years.

There is, however, a just claim made, by those gentlemen, of equal advertising rights with college officials, whose specialties and positions are most liberally advertised by college circulars and notices in the daily and medical press. But simple Dr. A. advertises his specialty as does the renowned Dr. B., who has the good fortune to be *Professor* of the particular branch. A. pays out of his own pocket for the pleasure, whilst the college settles the bill for B. Colleges might advertise like all other schools; no institution of learning details the names of its teachers, except in its annual announcement, never in standing advertisements. Why is this done by medical schools?

There can be no question as to the wording or meaning of the Code of Ethics of the American Medical Association, which is adhered to by all other associations, or the rules so distinctly laid down by the American Ophthalmological Society, which do not even permit the word "oculist" to be used in connection with any public notice of the physician doing an ophthalmological practice; that his sign must read as plain "M.D.," without limitation or addition. So many are advertising freely without infringing the Code, that it certainly seems unjust that the physician not favored by such accident which permits of this, should be prevented from placing his name with equal publicity before the profession and laity.

It would be well if these questions were pushed to an issue before the St. Louis Medical Society, and if the societies of other cities would bestir themselves, and call to task their offending members, as well as those offending under the semblance of the law. A strict line should be drawn and a law made to govern every member of the regular profession without exception; and all offenders punished, or else they should be exonerated and their action thoroughly justified.

Country practice is the great incentive to advertising, as numbers of the ailing in smaller towns and remote districts coming to the city for relief, are guided by the advertisement which best pleases and suits their fancy. If we have a law such as the Code of Ethics of the American Medical Association, we must obey it; it is the result of thoughtful deliberation of able and honorable men, and that it is pretty nearly correct may be argued from the similarity of the regulations which govern the members of the medical profession in other countries.

As the St. Louis Medical Society has once begun the work, let it go on fearless of consequences; however unpleasant it may be to wound the feelings of a brother practitioner, let right be done; and let the profession elsewhere second these efforts and urge bold action. Let us adhere to the decision of chosen men, whatever it be. It is, as a rule, the restless jealous minority, unwilling to seek success by the slow process of hard work, who are anxious for other and easier means of rising above the surface; and such advertising should be squelched, but the law must apply to all alike.

CHICAGO.

(From our Special Correspondent.)

The Rush Hospital Medical College.—The new hospital building in connection with Rush College is being pushed forward toward completion. It will be ready for occupancy next spring.

The Cook County Hospital.—The two new pavilions of the Cook County Hospital are nearly ready to be occupied. They will accommodate about one hundred and fifty patients.

The Medical Colleges of Chicago show about the usual number of students at this season. The Chicago College has about one hundred and fifty pupils; the Rush about four hundred and twenty-five; the Woman's about ninety; the College of Physicians and Surgeons about one hundred and fifty.

Rush Medical College.—Dr. W. T. Belfield has been appointed a Lecturer on Surgery in Rush College, to take the place of Dr. Roswell Park, who resigned some weeks ago to accept the Professorship of Surgery at Buffalo.

CINCINNATI.

(From our Special Correspondent.)

The Miami Medical College.—Dr. William A. Rothaker has been appointed Lecturer on Pathology in the Miami Medical College, and began a course of lectures there this week. Dr. Rothaker is a young man of more than ordinary ability, and the Miami College is to be congratulated in its choice of one so peculiarly fitted for the position. The lectures that Dr. Rothaker has delivered as pathologist to the Cincinnati Hospital have won for him an enviable reputation, both because of his familiarity with the subject and his ready use of language. Among his literary productions is the text accompanying the *Atlas of Obstetrics and Gynecology*, published in this city a year ago.

Dr. William B. Thornton, one of the oldest practitioners of this city, died recently at his residence on College Hill. In his will he provided substantial endowment for a Thornton professorship in Wabash (Indiana) College.

BALTIMORE.

(From our Special Correspondent.)

The Johns Hopkins Lectures on Municipal Hygiene.—Dr. John S. Billings has been lecturing at the Johns Hopkins University before the students of the University, persons interested in sanitary science, and the administration of cities, and the medical profession, on Municipal Hygiene. He has already delivered several interesting lectures of his course of twelve. The following is a brief abstract of the chief points discussed in the first four.

Sanitary science is not a perfect science; many of its results can only be said to be probably true, and definite laws are not yet established. But it is much better to know what is likely to promote healthfulness than to be ignorant of the matter. This is the age of cities; they have been growing very rapidly. This has its good and its evil side. The sanitarian and statesman's object is to keep the good and get rid of the evil. This they should try to do, not only on ethical grounds, but also because it is practical—it pays. The sanitarian tries to check unnecessary waste of life, to make men's lives happier and longer, and freer from pain, to increase the productive powers of the citizens, and indirectly to prevent vice and crime, which flourish under the same conditions as disease. He studies the influence of existing conditions upon the life and health of the citizens by means of vital statistics. In collecting vital statistics he finds great trouble for many reasons.

Mortality (*i. e.*, ratio between number of deaths and number of living inhabitants, per thousand) is much greater in cities than in rural districts. In cities it increases with the density. The mortality is not equally distributed among all classes, and is greater among males than among females, greater among colored population than among white, and is greater among the lower classes. In cities it is greatly affected by prevailing occupations, and by emigration and immigration. The birth-rate in cities is greater than in the country. Among the American families in New England, the birth-rate is gradually lowering, so that in some districts the birth-rate does not exceed the death-rate. The construction of life tables showing expectation of life is of great importance. In many places they are, however, very difficult to construct, on account of insufficient data. They should be made for male and female, white and colored population, in the various parts of city and country.

Of late years attempts have been made to study statistically the diseases which cause death, and to classify them. They may be divided into (1) hereditary, (2) physical and chemical (due to weather, climate, soil, etc.), (3) organic and vital, (4) mental and emotional. To the third class belong the bacterian diseases, which are divided into (1) parasitic, (2) contagious, (3) miasmatic, and (4) miasmatico-contagious. The Romans believed that certain diseases were caused by living animals in the human body. This notion was first put into a scientific theory by Pasteur, and it is now known as the "germ" theory. Many have been working in this field; one of the most important results is Pasteur's "attenuation of virus," by means of which a second attack of the same disease can be prevented. Septicæmia and like diseases are now believed to be due to the germs of putrefaction. In this direction, great strides have been made, so that the dangers of surgical operations are very greatly diminished. The importance of thorough investigation of this subject is recognized by several European governments, which are spending great sums of money for their prosecution—our government, on the other hand, is still doing nothing.

Water and its Supply.—By water many diseases are conveyed; great care must therefore be exercised in its supply. The old division of water into wholesome, suspicious, and dangerous must be accepted with some modification. Rainwater is not pure, always containing germs which it has washed out of the air. To secure a good supply of pure water is the great problem. In large cities it is practically impossible to preserve wells unpolluted, the vault and the well are often in direct contact, as, for example, the "sulphur" wells of Baltimore and Washington, a few years ago. The danger is due to living organisms present. How much of foreign substances are living, chemistry cannot tell. The biologist can, by observing growth, effects, etc. Dr. Koch found thirty-eight million microdermes (living organisms) in a cubic centimetre of impure water, but in the same quantity of pure distilled water only four. His experiments show that water with more than one hundred and twenty microdermes to the cubic centimetre is unfit for drinking purposes. The chemist can do two things: (1) determine any gross pollution, and (2), by making periodical examinations of a given supply, detect any change from its normal condition, which can then be investigated. All attempts to pollute the water supply above the city should be prevented. When none but suspicious water is available to a city, it can be greatly purified by filtration, especially through spongy iron, which destroys the vitality of germs. Waste of water, caused chiefly by leaky fittings and bad faucets, is a great drain on water supply, much greater than one would think. Manchester, Liverpool, and Glasgow require all fittings to be examined, and by an ingenious method discover all leaks, which are speedily repaired. By these means these cities have sufficient water, while otherwise they would be in great want.

LONDON.

(*From our Special Correspondent.*)

The Debate on Prof. Lister's Address.—The debate before the Medical Society of London, on Monday, November 5, proved to be of considerable interest, and the hour of adjournment was overstepped by another hour to allow of the full discussion of this remarkable subject, but more especially to hear what Prof. Lister had to say in answer to the objections made against his theory and practice. Mr. Bryant was the first to speak, and in an able though rather discursive manner, he apparently made out a strong case against Prof. Lister's teachings. Of the value of antiseptic surgery, Mr. Bryant had no doubt, but on the evening in question he joined issue with Prof. Lister on at least three points. He complained of the too confident expressions used by him. He did not think the operation was called for or justifiable in most cases of simple recent fracture of the patella. And lastly, he contended that strict Listerism was not necessary in order to be perfectly in accord with the grand principles of antiseptic surgery. Readers of Prof. Lister's address will not fail to see that the charges brought against the language of the address, referred to such phrases as "morally certain that septic influences could be avoided"—"convert serious risk into absolute safety and certainty." Mr. Bryant said, indeed, he thought that Prof. Lister did not really intend these statements to be so absolute, for in another part of the paper allusions were made to certain "disasters that might occur." He considered the operation unjustifiable because the results of the old-fashioned treatment were in his experience quite satisfactory. It is true that in many instances there was separation for more than half an inch, but the utility of the limb was by no means impaired.

Besides Mr. Bryant the discussion was joined in by Messrs. Adams, Bloxam, Gant, Henry Morris, William Rose, G. R. Turner, Morrant Baker, Edmund Owen, and others. Most of these gentlemen concurred in the views expressed by Mr. Bryant. Messrs. Bloxam and Rose were exceptions, however, and both these gentlemen had performed the Listerian operation three times with remarkably good results. Perhaps, the speech by Mr. Henry Morris told best of all against Mr. Lister. Mr. Morris made much of the statement, probably used only figuratively by Mr. Lister, to the effect that a first year's student could perform the operation, so simple were the procedures. Stress was also laid by Mr. Morris on the friability of the bone forming the patella. This was proved not only by the primary accident, but also by the fact, vouched for also by Mr. Bryant, that refracture takes place not through the seat of ligamentous union, but through the bone and generally the lower fragment. Mr. Morris thought that antiseptic principles were the main ones, and drew a distinction between Listerism and other modes of attaining the ends of antiseptic treatment.

But to our minds, in his reply, Mr. Lister was not only fully equal to the occasion, but actually came off almost more than conqueror. He ventured to say that even Mr. Bryant would be surprised to see the records of his (Mr. Lister's) death-book. He had operated on numbers of cases of ununited fractures of the femur and for loose cartilages of the joints without a single death or disaster; and in "a multitude" of cases of disease of the knee-joint with similarly good results. Answering Mr. Bryant, he would say that the disasters to which allusion had been made, were to be feared in the hands of those who did not carry out the strict antiseptic precautions, and he repudiated the notion that he feared such disasters in his own hands. He did not mean to say that he would encourage every surgeon to operate in cases of simple recent fractures. Far from it. But he did believe that with due care and proper precautions such operations might be made so free from risk that the operator might feel "morally certain that no septic influences should be introduced." The phrase "convert serious risk into absolute safety," had reference not to the condition of the patient, but to the prevention of all those diseases which come from the outside. For Mr. Lister, no separation could possibly be made between Listerism and antiseptic surgery; the one was coextensive with the other, and he denied that he had advocated any single stereotyped mode of procedure. He spoke well of corrosive sublimate, iodine, eucalyptus, salicylic wool, and other dressings. Mr. Lister also objected that the results of the old treatment of fractured patella were all that could be desired. His experience, indeed, led him to the opposite conclusion.

BERLIN.

(*From our Special Correspondent.*)

Anatomical Teaching at the Berlin University.—The lecture catalogue of this University is just out, but it does not exhibit the important changes recently made in the anatomical department. C. B. Reichert, the venerable successor of Johannes Müller, has at last consented to become restricted to the administration of the Anatomical Museum, in response to the combined efforts of the press, the government, and his own colleagues. German professors, as is known, are unremovable, and sometimes make a too prolonged use or rather abuse of this right. Long enough it was an open secret, that Reichert, otherwise so well merited, belonged to this category, and it was the unanimous opinion that the anatomical instruction at our largest university during the last ten years was in a very bad condition, and it threatened to become of serious detriment to the whole profession.

There is no doubt that Prof. Waldeyer, of Strassburg, who has been recently elected as a second lecturer in anatomy, will soon restore the diminished reputation of the anatomical chair. We are informed that he has appointed Dr. Hans Virchow, the son of the great pathologist, to be his second prosector (the first being Prof. R. Hartmarn, the anthropologist).

Discovery of the Mantle of the Fish-brain.—Nevertheless, Reichert's studies on the normal and comparative anatomy of the brain will not be forgotten. A pupil and former assistant of his, Dr. Rabl Rückhardt, who meanwhile acknowledges to have found it difficult enough to get over the detrimental influence of a school, whose leader indulged in the negation of every modern progress, has lately made a very important discovery. Until now, it seemed almost impossible to state a proper correspondence between the different parts of the brain of teleostian fishes. There existed unsettled controversies with regard to the interpretation of almost every region, particularly the lobi optici and what used to be called the hemispheres. The researches of some modern investigators, far from throwing light into this dark domain of comparative anatomy, only further complicated the question.

But lately Prof. Fritsch declared the "tectum loborum oysticorum" to be homologous to the pallium (mantle) of the higher vertebrates, being unable to find it in the apparently solid hemispheres. Now, Dr. Rabl Rückhardt has discovered this pallium *in loco*, reduced to a thin epithelial layer, covering the hemispheres. Between them there exists a cavity, being the second ventricle, not yet separated by a fissura pallii; consequently the two large ganglionic bodies forming the floor of this cavity, and formerly taken for hemispheres, must now be regarded as corpora striata. Rhinencephalon (olfactory bulbs), corpora striata, and epithelial layer constitute, together, the "cerebrum," and the reduction of what represented the seat of the highest intellectual powers in other vertebrates to a simple epithelial membrane, justifies our looking on the fish-brain as on "an idiotic reflectory engine, so much beneath the brain of higher animals as a simple epithelium is beneath the complicated nervous tissue of the cortex." The proofs of the homologies drawn by Dr. Rückhardt are derived partly from the embryology of salmonides, partly from a series of microscopic sections of the brains of adult fishes, together with the cranium, by means of imbedding the latter in celloidine (collodion), which keeps the very thinnest membrane in its original position. A hundred years' controversy is thus brought to a satisfactory conclusion.

The Dubois Reymond Jubilee.—On the 22d of October, E. Dubois Reymond, the well-known physiologist and philosophical essayist, celebrated the twenty-fifth anniversary of his nomination as a professor under the general sympathy of his friends, pupils, and colleagues.

New Quarantine Regulations at Pensacola.—At a meeting of the Board of Health of Escambia County, Florida, on the 10th of November, it was

Resolved, That from and after the 15th day of May, and until the 1st day of November, A.D. 1884, no vessels from Havana, Vera Cruz, Rio de Janeiro, or other points where yellow fever has actually appeared, shall be permitted to dischhrge ballast or receive cargo in the Port of Pensacola.

That all vessels sailing from other ports of the West India Islands, Central and South American States, and points subject to infectious or contagious diseases, and arriving in the Port of Pensacola, on and after the 1st day of May, and before the 15th day of November, A.D. 1884, shall discharge their ballast in quarantine, be fumigated and cleansed, and remain in quarantine at least ten days after fumigation, and may then be released by the quarantine physician, approved by this Board.

That vessels from Havana, Vera Cruz, Rio de Janeiro, and Aspinwall, and all vessels having unclean ballast on board, arriving in this port, between the 1st day of November, 1883, and the 15th day of May, 1884, shall discharge their ballast, either under water, below low water mark, or must discharge their ballast at quarantine station, subject to the orders of the officer in charge of that station.

Yellow Fever at Havana.—Sanitary Inspector Burgess, of the Marine-Hospital Service at Havana, reports that there were eighteen deaths from yellow fever in that city during the week which ended on the 15th inst., and that the number of cases in the city and harbor was about seventy-five. He adds: "At no time during this year has so large a proportion of the sailing vessels in the harbor suffered from yellow fever as are now suffering from it."

Cholera Quarantine Raised in China.—The State Department is in receipt of a letter from the United States Legation, dated Japan, Tokei, 20th October, 1883, announcing that, as the cholera epidemic at Swatow has almost died out, the enforcement of quarantine against that point has been discontinued.

Successful Treatment of Cholera.—Our Consul at Port Louis, Mauritius, transmits to the State Department an account of the successful treatment of cholera in that vicinity by Mr. T. Edward Fyers. "It shows that Mr. Fyers, although not a physician, saved by the following simple treatment one hundred and forty-nine persons out of one hundred and fifty, who were attacked by the disease. On the first appearance of an attack, or as soon as possible afterward, there was administered an emetic of 30 grains of ipecacuanha and 2 grains of tartar emetic. After the emetic had acted copious doses of warm water were given to clear the stomach. In case either vomiting or purging continued, the usual doses of diluted sulphuric acid were sure to stop it." The patient, Mr. Fyers recommends, should not be allowed to eat anything until the tone of the stomach has been restored.

University of Pennsylvania.—It is reported that the University of Pennsylvania is about to receive a legacy of $250,000, for the endowment of a training-school for nurses.

College of Physicians and Surgeons of Chicago.—Dr. Frank O. Stockton, of Newark, N. J., has been elected to the professorship of diseases of the nose and throat in this institution.

The New York Polyclinic, we are informed, opens the second session of six weeks of its second year, 1883–84, with a class of sixty physicians.

The success of the first year was demonstrated in the fact that the class numbered one hundred and sixty-one.

There can be no truer sign of progress in medicine in America than is evident in the earnestness with which practitioners are seeking clinical and advanced study in the various schools for graduates.

The Library of the Surgeon-General's Office.—The additions to the library during the past year, include 3912 volumes, and about 5000 pamphlets; making the total number in the collection about 60,000 volumes and 68,700 pamphlets.

Dr. David W. Yandell, of Louisville, has been recently elected an Honorary Member of the Medical Society of London.

Unveiling a Bust of Dr. Sims.—At the recent twenty-ninth anniversary of the founding of the Woman's Hospital in the State of New York by the late Dr. J. Marion Sims, appropriate exercises were held in the endowed ward of the building, at Fourth Avenue and Forty-ninth Street. A marble bust of the late Dr. Sims was presented to the Hospital by Mrs. Russell Sage. She paid a glowing tribute to the founder, and spoke of his warm attachment to the Hospital, which was the first of its kind in the world, and which, through his efforts, had achieved such success. After the unveiling of the bust, which was from the chisel of Dubois, of Paris, there were addresses by Dr. T. Addis Emmet and the Rev. Dr. O. H. Tiffany.

A British Tribute to Dr. Marion Sims.—In commenting on the great professional services of Dr. Sims, the *British Medical Journal* says: His achievements are written in imperishable letters in the annals of modern surgical practice; and there are thousands now living, and succeeding thousands in generations yet unborn will have reason to rise up and call him "blessed." The greatest success which any surgeon of genius can hope to achieve, is to be able to definitely and largely add to the power of surgery to save life, to relieve misery, and to effect cure. This success Marion Sims attained in a degree which few can hope to attain.

Sir Prescott Hewett, Bart., recently retired from the active practice of his profession. This step, however, we are glad to learn, was not due in any way to failing health.

Professor Burdon-Sanderson.—A Royal Society Medal has been presented to Prof. J. S. Burdon-Sanderson, for the eminent services which he has rendered to physiology and pathology, especially for his investigation of the relations of micro-organisms to disease, and for his researches on the electric phenomena of plants.

Professor Pajot has been recently recommended by the Faculté de Médecine, to fill the Chair of Clinical Midwifery made vacant by the death of Prof. Depaul.

Tubercular Disease of Lung.—The question of tubercular disease of the lung (especially with regard to heredity, contagiousness, and curability), and also of the relation of pneumonia to phthisis, is about to be presented to the Committee for Collective Investigation of Disease in Berlin.

Centenary of the Vienna General Hospital.—Next year will be completed the centenary of this great hospital, which has so long been the pride and envy of the world, and around which the memory of so many famous men lingers. In anticipation of this event, a most interesting work (*Die Medicin in Wien während der letzten 100 Jahre*) has been written by Dr. Puschmann, the Professor of the History of Medicine at the Vienna University, in which he reviews the whole progress of medical education at Vienna from the time (1744) when, at the instance of Maria Theresa, the illustrious Van Swieten—friend and pupil of Boerhaave—left his native place, Leyden, to establish himself in the Austrian capital.

Monument to Pinel.—Paris will shortly possess a monument of the great alienist physician Pinel, the Ministry des Beaux-Arts and the Municipal Council of Paris having responded to a proposal put forward by the Medico-Psychological Society. M. Ludovic Durand is the sculptor of the monument, which represents Pinel, standing, holding in his hand the chains which he has just struck off from a young girl who crouches at his feet. The monument will shortly be erected in the Place Pinel, a small open space close behind the great Hospital de la Salpêtrière.—*Lancet*, November 3, 1883.

The International Medical Congress, Copenhagen, 1884.—The following are the provisional programmes for several of the sections of the next International Medical Congress, to be held in Copenhagen, in August, 1884:

Laryngology.—1. Treatment of goitre. 2. Syphilitic affections of the larynx, their forms and frequency. 3. The prognostic signification of the different local manifestations of tuberculosis of the larynx. 4. The local treatment of diphtheria. 5. Medicated inhalations in diseases of the air passages. 6. Pathogenesis and treatment of spasm of the glottis. 7. The operative removal of foreign bodies and neoplasms of the air passages. 8. Treatment of nasal polypi—evulsion—galvano-cautery. 9. Paralyses of the larynx. 10. Methodical education of the voice.

Otology.—1. Operative opening of the mastoid process. 2. Nervous diseases of the ear. 3. Dissection of the organ of hearing, with special reference to its pathological alterations. 4. The importance of aural disease in determining fitness for military service. 5. The different kinds of subjective noises and their treatment. 6. Treatment of chronic catarrh of the naso-pharyngeal cavity. 7. The bearing of bacterology in otology. 8. Prophylaxis of chronic diseases of the ear after eruptive fevers. 9. Diagnosis of the intracranial complications of suppurative inflammation of the middle ear. 10. The importance of otology in general medicine.

Section of Psychiatry and Neurology—Psychiatry.—1. Statistics of mental diseases and psychiatric institutions of Northern countries. 2. Proposal for the conformity of annual reports of different insane asylums of different countries. 3. The rôle of colonies in the treatment of the insane. 4. The value of exercises in the treatment of mental diseases. 5. The rôle of schools in the production of mental diseases. 6. The temperature of the body during the primary stages of mental diseases. 7. Mental alienation in infancy. 8. Perversity of sexual instinct. 9. The psychical troubles which replace epileptic attacks. 10. The rôle of syphilis in general paralysis. 11. The anatomical characteristics of the heads of idiots. 12. What method should be employed to break up the use of morphine, and what are the best conditions for treatment?

Neurology.—1. The effect of lesions of the peripheral nerves in the production of the anatomical alterations in the central nervous organs. 2. The secondary degenerations in the brain and spinal cord. 3. The troubles of speech of central origin. 4. The visual troubles of cortical origin. 5. Cortical epilepsy. 6. Vaso-motor and trophic neuroses. 7. The value of peripheral organic affections (especially the sexual organs) in the production of functional nerve troubles, especially hysteria. 8. Amyotrophic lateral sclerosis or progressive amyotrophic bulbar paralysis, especially as regards the constancy of anatomical lesions, and its difference or identity with progressive muscular atrophy (Aran-Duchenne). 9. The curability of tabes dorsalis. 10. The rôle of syphilis in the etiology of tabes dorsalis. 11. Is the paralysis of Landry a particular disease, or only a symptom which may be produced by different pathological processes? 12. The value of nerve tension as a method of cure.

Section of Obstetrics and Gynecology.—1. The antiseptic method in laparotomy (Mikulicz). 2. Anæsthesia in laparotomy. 3. Early ovariotomy (Knowsley Thornton). 4. The treatment of fibromyomata of the uterus by laparotomy (Kœberlé). 5. Castration in fibromyoma of the uterus. 6. Castration in mental and nervous diseases (Regar). 7. Vaginal extirpation of the cancerous uterus (Schröder). 8. Dilatation of the uterus. 9. The operative treatment of prolapse of the uterus and the vagina. 10. Ovulation and menstruation. 11. The operative treatment of extra-uterine pregnancy (Litzmann). 12. International nomenclature in obstetrics (A. Simpson). 13. The albuminuria of pregnant women (Hälbertsma). 14. The treatment of abortion (Gaillard Thomas). 15. The management of delivery (Stadtfeldt). 16. Obstetrical anæsthesia. 17. Treatment of rupture of the uterus during labor. 18. Treatment of neglected shoulder presentation. 19. The Cæsarean operation and the substitutes for it (P. Müller). 20. Statistics of puerperal fever in Denmark, Norway, and Sweden.

A GOVERNMENT INSPECTION OF CATTLE AND DEAD MEAT DESIRED.—The convention called by the Commissioner of Agriculture to consider the contagious diseases of domestic animals met in Chicago on the 15th instant. In the absence of the Commissioner of Agriculture, Dr. Loring, the meeting was opened by Professor Morrow, of the Illinois Industrial College, and Senator Williams, of Kentucky, was made permanent chairman.

Elaborate papers were read by Professor Law, Dr. Salmon, of the Department of Agriculture, Dr. Parsons, Territorial Veterinarian of Wyoming, Dr. Gadsden, of Pennsylvania, and Mr. Saunders. All the grazing sections of the country from Wyoming to New Jersey were represented. The only disease which was deemed an appropriate subject for national legislation was the lung-plague among cattle. It was universally denied that any vestige of the disease exists west of the Alleghanies, and it was admitted that it does exist in parts of New Jersey, New York, Pennsylvania, Virginia, and Maryland. In all the papers and discussions the necessity of stamping out the plague was insisted on, not only to protect the herds of the West from infection, but to remove all suspicion, so that no discrimination can be reasonably made against them in foreign countries. The State law being inadequate, there was an evident determination among the leading breeders and grazers to insist upon action by the Federal Government in the matter of destroying the disease, and, since this is the only authority recognized abroad, it was also argued that a thorough inspection of all cattle and dead meat exported should be made, and a certificate of soundness given by the officers of the National Government.

The Swine Breeders' Association also recommended Government inspection of exported hog products.

SANITARY CONVENTION AT IONIA, MICHIGAN.—Arrangements have been made by a local committee of citizens of Ionia, acting with a committee of the State Board of Health, for a sanitary convention which will be held in Ionia, December 13 and 14, 1883.

At each session of the convention there will be addresses or papers on subjects of general interest pertaining to public health, each paper to be followed by a discussion of the subject treated.

Among the subjects which it is expected will be presented and discussed, are the following:

Sewerage; Ventilation; Present and Future Water-Supply of Ionia; Contagious and Infectious Diseases; Foods and their Adulterations; School Hygiene; Ice from Impure Sources; Poisonous Wall-paper; Best Method of Disposal of the Dead; Disposal of Waste Matter.

HEALTH IN MICHIGAN.—Reports to the State Board of Health, for the week ending November 17, 1883, indicate that whooping-cough, typhoid fever, and intermittent fever have increased, and that typho-malarial fever, dysentery, measles, and remittent fever have decreased in area of prevalence.

Including reports by regular observers and others, diphtheria was reported present during the week ending November 17, and since, at nineteen places; scarlet fever at twenty-four places; and measles at five places.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM NOVEMBER 19 TO NOVEMBER 26, 1883.

MOORE, JOHN, *Lieutenant-Colonel.*—Relieved from duty as Medical Director, Department of the Columbia.—*S. O. 29, Department of the Columbia*, November 8, 1883.

BACHE, DALLAS, *Major and Surgeon.*—Assigned to duty at Fort Adams, R. I.—*Par. 5, S. O. 215, Department of the East*, November 19, 1883.

BROOKE, JAMES, *Major and Surgeon.*—Relieved from duty at Angel Island, California, and assigned to duty as Post Surgeon, Presidio of San Francisco, California.—*Par. 1, S. O. 162, Department of California*, November 14, 1883.

HORTON, SAMUEL M., *Major and Surgeon.*—Leave of absence granted October 20, 1883, extended three months.—*Par. 7, S. O. 266, A. G. O.*, November 20, 1883.

TOWN, F. L., *Major and Surgeon.*—Until further orders, to perform the duties of Medical Director, Department of the Columbia.—*S. O., 29 Department of the Columbia*, November 8, 1883.

WILLIAMS, JOHN W., *Major and Surgeon.*—Granted leave of absence for one month, on surgeon's certificate of disability, with permission to leave the limits of the Department.—*Par. 5, S. O. 157, Department of the Columbia*, November 12, 1883.

MUNN, CURTIS E., *Captain and Assistant Surgeon.*—Assigned to duty at Fort Warren, Massachusetts.—*Par. 4, S. O. 216, Department of the East*, November 20, 1883.

WINNE, CHARLES K., *Captain and Assistant Surgeon.*—Relieved from duty at Fort Winfield Scott, California, and assigned to duty as Post Surgeon, Angel Island, California.—*Par. 1, S. O. 162, Department of California*, November 14, 1883.

APPEL, A. H., *First Lieutenant and Assistant Surgeon.*—Relieved from duty at Fort Warren, Massachusetts, and assigned to duty at Madison Barracks, N. Y.—*Par. 4, S. O. 217, Department of the East*, November 21, 1883.

RICHARD CHARLES, *First Lieutenant and Assistant Surgeon.*—Relieved from duty at Fort Adams, R. I.—*Par. 3, S. O. 216, Department of the East*, November 20, 1883.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. XLIII. SATURDAY, DECEMBER 8, 1883. NO. 23.

ORIGINAL LECTURES.

BONE LESIONS DEPENDENT UPON NERVOUS DISEASE.

A Clinical Lecture delivered at the Hospital of the University of Pennsylvania.

BY HORATIO C. WOOD, M.D.,
PROFESSOR OF NERVOUS DISEASES IN THE UNIVERSITY OF PENNSYLVANIA.

GENTLEMEN: I shall to-day present to you a subject which I think has never before been lectured on in this institution, and will therefore have at least the charm of novelty. I see this patient for the first time, but I am informed that he has upon his right foot a large growth which has been of slow development. He has been sent from the Orthopædic Dispensary for an opinion; and the question which has to be determined, is whether this tumor, which is evidently bony in its nature, is the result of disease originating in and confined to the bone, or whether it is the evidence of trophic changes in the bone due to disease of the nerve-centres.

In order to give you an intelligent idea of the ground upon which the opinion that I shall formulate is based, it seems necessary to discuss briefly the whole question in regard to the trophic changes in the bones which follow diseases of the nervous system. I shall therefore leave the consideration of this individual case for a moment, and discuss the nature of the changes in the bony tissues which follow, or are connected with, diseases of the nervous system. Prominent among these changes are the alterations which are found to take place in general paralysis of the insane, and which probably are also present in other forms of insanity. Many years ago, it was noted that the bones of insane patients were frequently broken, and that not rarely there would be multiple fractures in the same case. These frequently recurring fractures have been brought forward by the opponents of insane asylums as evidences of cruel and rough handling on the part of attendants, but we now know that there is often a tendency of the bones to fracture upon the least exposure to force. Under certain circumstances, the bones of persons suffering from general paralysis, and probably the bones of those suffering from other forms of insanity become enlarged and readily fracture. When broken, these bones unite easily and with great rapidity, and with the formation of an excess of callus, so that there may be a large tumor at the seat of the fracture. After death in these cases, it will be found that the bones are notably enlarged; that they are so soft as to be readily cut with a knife; and that there exudes from the cut surface a pink or reddish sanguinolent juice, which, when placed under the microscope, is found to contain large quantities of nuclei and imperfectly developed cells. If a section of such a bone is made, it is shown to be more porous than normal, and the microscope reveals great dilation of the Haversian canals, which are filled with a fluid containing embryonic cells. A very curious feature in this form of bone disease is that it attacks almost exclusively the skeleton of the trunk. It is the ribs, the bones of the pelvis or of the vertebral column which are affected.

I have seen one case in which changes in the bones nearly like these occurred in a person supposed to be suffering from chronic alcoholism. I saw the patient just before death, and am unable to say whether the nervous symptoms were those of chronic alcoholism or whether they were the commencing symptoms of a peculiar form of general paralysis. But in this case it was the limbs which were especially attacked.

Again, it has been found that there is a peculiar form of arthritis connected with hemiplegia, and especially when such hemiplegia is dependent upon diseases of the brain in which there are minute foci of softening. In these cases the diagnosis of this form of arthritis is a matter of importance, for I believe that in nine cases out of ten this condition is supposed to be due to rheumatism, and the patient is believed to be suffering from a second disease—acute or subacute rheumatism—supervening on the attack of hemiplegia. In separating the two affections, it will be noted, in the first place, that hemiplegic arthritis comes on in twenty or thirty days after the attack, and just about the time at which late muscular contraction develops in certain cases. In the second place, the inflammation of the joints, at least in the early stage, is limited to the affected side; there are moderate pain and exquisite tenderness in the affected joints, which are much swollen, the swelling usually developing rapidly and being accompanied by distinct œdema with pitting on pressure. The history of such a case differs entirely from that of chronic rheumatism. In rheumatic arthritis there is no tendency to the development of pus, and little or no tendency to the breaking down of bony tissue, the effusion within the joint being serous and remaining so for months. The cartilages may be removed, but the bone beneath the cartilage becomes hard, thickened, and of irregular stellate growth, and has little or no tendency to ulceration and destruction. Frequently osteophytes are found in the effusion. In the joint affected with hemiplegic arthritis, although the process is very slow and the arthritic changes may continue for months and even years, still there is a tendency for the formation of purulent liquids, and a tendency to the destruction, not only of the cartilages, but also of the bone. You will see in this specimen which I hold in my hand, an illustration of the changes of which I am speaking. This elbow-joint was removed from a woman who died in the Philadelphia Hospital several years ago. This patient was completely hemiplegic on the right side, and completely aphasic. When I first saw her, she complained greatly of pain in the leg and arm. The moment the coverings of the bed were lifted, or the limb approached, she would scream and yell with the mere fear of contact; when the joint was touched, the emotional disturbance became uncontrollable. The joints were swollen, very glossy, and hard to the touch. When she first came under observation, the affection was confined to the hemiplegic side, and was evidently not rheumatic. There was no history of rheumatism, and the joints did not present the peculiarities of rheumatic joints. For many months the joints remained in the same condition, and finally the joints of the other side became slightly affected. After death the lesion of the brain was found to be a large hemorrhage in the neighborhood of the claustrum, completely destroying the external capsule; hence the complete hemiplegia and aphasia, and the secondary nutritive lesions. On opening one of the joints, I found that it contained a moderate amount of purulent serum, that the cartilages were almost entirely destroyed, and that the surface of the articulations was largely affected and eroded. After the bones were boiled, the articulating surfaces were found to be exceedingly porous, and in some places part of the bone had been eaten away. Examining the specimen you will note that the bone is very light, and that its shaft has become exceedingly thin, so that there is not only a destruction of the joint, but atrophy of the shaft of the bone.

There is a third class of diseases of the bone appearing in connection with disease of the nervous system, namely, those which are associated with locomotor ataxia. In this form of bone disease, there are two seats of the alterations, the diaphyses being affected in some instances, while in other cases the epiphyses are the parts involved. You will remember that I said that in diseases of the bone dependent upon insanity, the skeleton of the trunk was the part affected. In locomotor ataxia, the trunkal bones escape almost entirely, and it is the long bones of the extremities which are more especially involved; and the diaphyses are most frequently the seat of the alterations. Attention was first called to this condition, as in bone affections of the insane, by the frequent occurrence of fracture in certain cases of locomotor ataxia, the fractures being produced without obvious sufficient cause; for instance, a man would go to cross one leg over the other, and sustain a fracture of the thigh. At first it was said that this was due to irregular muscular contraction; but it is perfectly clear that no irregular muscular contraction in making such a movement could be powerful enough to break a sound bone. Examination of the bones of those suffering from this variety of fracture showed that they had undergone atrophy. In addition to being atrophied, the bones were very hard. In certain cases this atrophy has seemed to be connected with hypertrophy. This condition has been denied by the French school of observers; but one case has been reported in which the femur of one side was atrophied, whilst the same bone on the other side was enormously enlarged. In other cases, it has been said that while the upper portion of the bone was atrophied and hardened, the lower portion has presented the changes met with in general paralysis. Fractures of these atrophied bones heal with great rapidity, and with the formation of an excessive amount of callus, so that a large tumor will be developed at the position of the fracture. The patient may not complain of the fracture, but may consult the physician on account of the appearance of a hard mass upon his leg. This relation is important, for the man before us is supposed to be suffering from locomotor ataxia.

There may be in locomotor ataxia an arthritis, instead of disease attacking the main shaft. The clinical characteristics of this form of arthritis are entirely different from those of hemiplegic arthritis. In some instances the enlargement is sudden. It may develop in the course of ten days, or it may reach its fullest extent in two or three days. Examining such a joint, it will be found to be painless; the swelling is large, is confined to the neighborhood of the joint, and often ends abruptly. When pressed upon, it feels hard, and does not distinctly pit. The joints remain in this condition for a certain length of time, when one of two changes is liable to occur. Sometimes acute inflammation develops, and acute arthritis and osteitis appear. This is, however, rare. Under these circumstances, the joint suddenly becomes hot, painful, and gives the ordinary clinical appearance of acute arthritis. The more usual change is for the swelling gradually to subside; the joint becomes irregular, but the articulating surfaces do not disappear, and it remains as a hard irregular joint. The effusion does not become purulent, and osteophytic growths are frequently found in the liquid.

In the present case, we desire to know whether this man is suffering from a bone disease which represents one of these trophic forms, or from bone disease of another character. I shall first examine the bony lesion. As you see, there is a large swelling at the right ankle-joint, projecting three inches above the dorsum of the foot. There is no pain in this, either by day or by night. I find no difference in the size of the side on the two sides.

When did this come on? A. "I am a plumber, and about two years ago I was sitting on a board, with my right foot under me, working. Pretty soon the foot felt as though it were asleep, and then I had severe pain. I got up, and found the foot all swollen. I broke the buttons off my shoe and took it off; my leg was black up to the knee. This happened in fifteen minutes. The swelling was as hard as it is now. After this, I was laid up for some weeks, the parts being very sore and painful."

It is clearly impossible that a mass as hard as this could have formed in fifteen minutes. This is evidently a bony tumor. The first tumor must have been of some other nature. The original pain and lameness continued in this foot for four or five months, and then gradually disappeared. He can now walk and attend to his work.

It is perfectly possible that this man had a spontaneous fracture within the ankle-joint at the time of the first attack. This is the only way in which I can reconcile this condition with the history which he has given. Probably in suddenly stooping or rising, he fractured the bone. This was followed, as is the case in articular fractures, by intense swelling, due to rapid effusion. This effusion was absorbed, and we now have a tumor, the result of excessive deposition of callus.

The next point to discuss is whether or not this man has locomotor ataxia. If he has not, the explanation of this symmetrical bony tumor which I have given is not correct, and I cannot explain the nature or cause of the excrescence. The tumor, evidently, is not malignant, for it has been there two years, and is painless.

Before referring to the presence or absence of locomotor ataxia, let me say one word in regard to the time at which the lesions of the bones in that disorder appear. They usually develop just before the symptoms of muscular incoördination make their appearance. In other words, the bone lesions are prodromic. There is one lesion of the bones in locomotor ataxia to which I intended to refer, and which I shall bring in here, a little out of its proper place, because it shows the close connection between the stage of sensory irritation and bone affection in locomotor ataxia. A person will have severe trigeminal neuralgia, perhaps associated with anæsthesia of the region supplied by this nerve without any other symptom, when suddenly the teeth will begin to drop out. They come out without any pain, soreness, or any premonitory symptoms whatever. In some reported cases, the teeth have dropped out during sleep, and threatened strangulation has resulted. We know that this is connected with the atrophic changes of locomotor ataxia. It is observed that after the loss of the teeth, the jaw-bone atrophies until it is reduced to a mere shell. Sometimes all of the teeth have been lost at once; in other cases, only a part at a time. Very rarely have both jaws been affected simultaneously. In these cases, the attention has been centred upon the trigeminal neuralgia, and the changes in the bone, being unaccompanied by pain, have gone on unnoticed. There has really been locomotor ataxia developing high up, involving the root of the trigeminal nerve, and causing the atrophic changes which eventually result in the loss of the teeth. This condition has, in the reported cases, come on before the symptoms of incoördination.

This patient says that he has been subject to rheumatism for the past four years, but has not had any swelling of the joints. In the majority of cases, the early stage of locomotor ataxia is diagnosed to be rheumatism. He has shooting pains in the arms and in the legs. These are sometimes so severe as to compel him to go to bed. There are also neuralgic pains around the chest, but no feeling of constriction. The patella reflex is entirely absent on both sides. The muscles react normally to electrical stimuli. He says that he has lost sexual power to a certain extent. He never had a period of sexual excitement. He feels giddy at all times, and cannot walk as well at night as in the daytime. He is able to work at his trade, but not as well as formerly; and he thinks that there has been no failure of the sight. You notice that, in standing, he keeps his legs further apart than is natural, and, in walking, he has a slightly straddling gait. He can stand pretty well with his eyes closed; he can also keep his balance for a short time, while standing on one foot, with his eyes closed, and the symptoms of loss of coördination are therefore not distinct in this patient; but the symptoms of the early stage of locomotor ataxia are present in the form of tearing, shooting, and darting pains in the legs and body; the loss of patella reflex; the presence of giddiness, and the inability to walk well in the dark. In separating these of this character from those of rheumatic pains, the characters which I rely upon are the following: The pains are bilateral instead of unilateral; they are relieved by, instead of being made worse by pressure, or if there be any tenderness, it is only at the moment of pain; they are apparently causeless; and, finally, they are associated with loss of patella reflex. Occasionally in locomotor ataxia, there will be some tenderness of the skin when the attack of neuralgia is at its height.

I believe that this man is suffering from the beginning stage of locomotor ataxia. If I found a bony lesion, like the one here presented, associated with absence of the patella reflex, I should strongly suspect beginning locomotor ataxia, but when we have at the same time neuralgic pains and some symptoms of muscular incoördination, I think that the diagnosis is clear.

ORIGINAL ARTICLES.

A CASE OF OVARIOTOMY, FOLLOWED BY RECOVERY,

WITH SOME REMARKS ON RECENT IMPROVEMENTS IN THIS OPERATION.

By L. S. McMURTRY, A.M., M.D.,
of Danville, Ky.

In order to place within easy reach of the statistician a case presenting some unusual features, and at the same time to illustrate the efficiency of some recent advances in abdominal surgery, the following case of ovarian cystoma, weighing thirty-three pounds, removed by abdominal section, is reported:

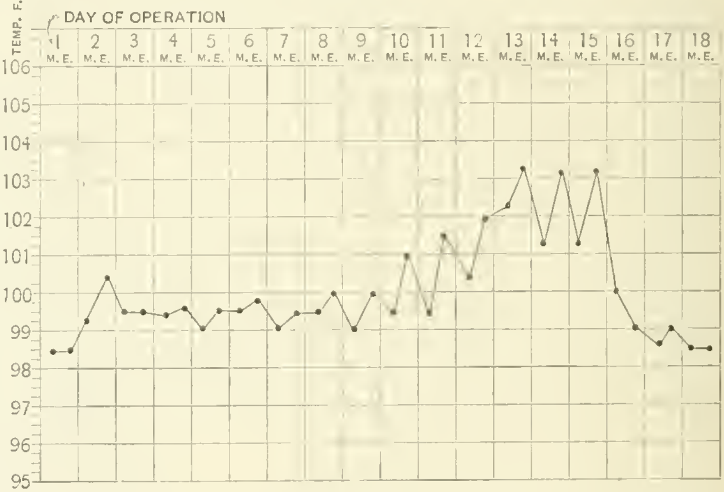
On September 10, 1883, I was called in consultation by my friend Dr. J. M. Meyer to see Mrs. H. S., of Mercer County, with the following history and condition: The patient is twenty-nine years of age, has been married six years, and is without children. About two years ago, she observed an enlargement of the abdomen, and supposed herself to be pregnant, though her menses persisted with regularity and no fœtal movements were felt. At the end of nine months, the tumor had reached in dimensions the extreme limit of pregnancy. It continued to grow, and at the date mentioned had attained occupancy of the pelvis and abdomen from Douglas's cul-de-sac to the diaphragm. The diagnosis of a polycystic tumor of the ovary was established by the usual methods, including exploration of the uterus, analysis of the urine, and chemical and microscopical examination of the contents of the tumor obtained by puncture with the hypodermic syringe. The characteristic wasting and anxious expression of countenance were to be observed, and the patient suffered with dyspnœa and an irritable stomach, both the results of pressure. The pulse ranged from 110 to 120 per minute, and the respiration was correspondingly accelerated.

On September 19th, at twelve o'clock, the operation was performed in the presence of Drs. J. M. Meyer, George Cowan, I. S. Warren, Fayette Dunlap, and Mr. Harry Cowan, a student of medicine, all of this city, and Dr. George Calvert, of Perryville. Drs. Meyer and Cowan kindly took charge of the anæsthetic—ether—and Drs. Warren and Dunlap and Mr. Cowan gave me valued and efficient aid throughout the operation.

The patient occupied a pleasant room in the second story of a delightful country place, where a pure atmosphere prevails, and a good light was had for the operation. On making an incision about five inches in length in the median line, the abdominal muscles were found much thinned by the tension and pressure to which they were subjected. The bleeding from the lips of the abdominal incision was controlled by artery-compressors and pressure with a sponge before opening the peritoneum. On exposing the tumor, two firm patches of parietal adhesions were encountered upon either side of the umbilicus, and introducing my hand into the left hypochondrium, other adhesions to the abdominal wall were separated. Realizing more sensibly the great dimensions of the tumor at this stage of the operation, the incision, which already extended to the symphysis pubis below, was extended more than three inches above, passing to the left of the umbilicus. The tumor, while of an irregular globular shape, was found to project in every direction, filling Douglas's cul-de-sac and the pelvis below, and being snugly adapted to the antero-posterior inclination of the diaphragm above. The periphery of the tumor was an aggregation of many small cysts, which gave the impression of a solid mass, while the interior was occupied by a number of larger cysts.

Plunging a Wells's trocar into the tumor and directing its point in various directions, I was enabled to empty the large cysts, dislodge the tumor from its situation, and turn it out through the incision. As the great cysts were emptied, the increased play of the diaphragm in respiration was observed by all around the table. The pedicle was short, broad, and thick, and situated upon the left side. Finding that one ligature could not safely encompass it, it was secured by Peaslee's chain ligature, so that it was ligatured in four sections. The ligature was of silk furnished me by Messrs. Tiemann & Co., of New York, and bore strong tension without breaking. The tumor was cut away about three-quarters of an inch beyond the ligature. The breadth and thickness of the pedicle were conspicuous at this stage of the operation, the surface of division from the tumor being fully five inches by two inches. The ligatures were cut short and the stump dropped into the abdomen. The right ovary was then examined and found to be in a healthy condition. The toilet of the peritoneum was made with the utmost care. Following the practice of the great master in abdominal surgery, Mr. Lawson Tait, of Birmingham, after sponging out the cavity of the pelvis and of the lumbar region, I filled the cavity of the abdomen with warm distilled water by means of a tube running from a basin held above the table. Holding the divided abdominal walls together with one hand, I moved the intestines with the fingers of the other hand so as to wash them thoroughly. The water was then removed with sponges, and this process twice repeated, when the water came out free from the tinge of blood. After placing five squeezed sponges in the abdominal cavity, I then proceeded to close the wound. After inserting the deep sutures, which were ten in number and of silk, the sponges were removed and the peritoneal surface found quite clean. The lips of the wound being brought evenly and firmly together by the deep sutures, the superficial sutures were inserted, the patient cleansed and placed in bed. The wound was dressed with dry absorbent cotton, adhesive strips applied, the abdomen covered with a thick layer of cotton, all secured by a broad flannel bandage around the body. The operation consumed one hour and a half. The patient was very sick from the ether and vomited a great deal during the operation. During the twelve hours following she suffered severely with nausea and vomiting, and ejected from the stomach at intervals dark fluid commonly described as "coffee-ground" vomit. She reacted, however, promptly, and six hours afterward the pulse was 102, and temperature 99.2°. Small draughts of warm water only were administered, and the nausea and vomiting gradually subsided. More than a pint of healthy urine was drawn with the catheter at 6 P. M. She slept at intervals during the night and on the morning following the operation was cheerful and without pain or nausea, with pulse 94 and temperature 99.5°. Food of every kind was withheld, and only occasional draughts of warm water were given to allay the thirst of which the patient complained.

The history of the next six days is that of continued progress. Beginning with small quantities of chicken-broth on the second day, food was given regularly, and was taken with relish. The temperature remained slightly above the normal, and the pulse ranged between 80 and 90 per minute. On the morning of the seventh day, the wound was examined, and found quite dry, with firm adhesive union. The superficial, and every alternate one of the deep sutures were removed and the dressing replaced. On the following day, the remaining sutures were removed, and the adhesive strips reapplied. On the fifth day after the operation, the patient passed urine without the aid of the catheter, and on the eighth day the bowels acted freely in response to an enema. On the eighth day the patient complained of pain in the vicinity of the pedicle, and exhibited evidences of inflammatory action. The skin was hot, the pulse quickened, and pain, tenderness, and swelling were manifest in the broad ligament of the left side. This was the beginning of a circumscribed inflammation about the stump, which continued several days, and gave some anxiety. The temperature then gradually rose, as shown in the accompanying diagram, until on the evenings of the thirteenth, fourteenth, and fifteenth days it reached 103°; on the sixteenth day it fell to 99°, and was normal after that date.



The treatment of this complication may be appropriately comprehended by the expression "good nursing." The hot vaginal douche was given every three waking hours, and hot cloths were applied to the hypogastrium. During the entire progress of the case no anodyne whatever was administered, with the exception of one-eighth of a grain of morphia on the night of the twelfth day. The pain was at no other time so intense as to necessitate the exhibition of opium, and believing the routine use of this drug after ovariotomy to be harmful by checking the eliminative processes and impairing the nutritive functions, it was withheld. I would not detract from the great value of this remedy in the treatment of inflammatory affections in general and of the abdomen particularly. By allaying pain, producing sleep, checking the early vomiting of peritonitis, and suspending the peristaltic movements of the intestines, its value in peritonitis is simply incalculable. But it should not be used as a prophylactic, and should be held in reserve as long as possible. In the case here reported the pain did not necessitate its use, and no vomiting occurred. Notwithstanding the elevation of temperature the appetite was maintained, and the secretions were not checked. The bowels acted almost daily during the existence of the circumscribed peritonitis, and the skin and kidneys were active in the performance of their functions. On the thirteenth day the menses appeared, and seemed to exert a good influence upon the pelvic inflammation. On the sixteenth day there was a marked improvement in the condition, and the fever and abdominal tenderness and swelling rapidly disappeared.

The exceptionally large stump was the focus of the pelvic inflammation, and it could not reasonably be expected that the repair of such extensive lesions would be without marked local and constitutional disturbance. On the twenty-first day an abdominal belt was placed upon the patient; she was allowed to sit up; and in a short time her recovery was complete. Throughout the entire after-treatment I had the unremitting aid and coöperation of Dr. J. M. Meyer, the attending physician, for whose judicious suggestions and efficient services the most grateful acknowledgments are due.

This case illustrates more than one of the great improvements which have so widely extended the domain of abdominal surgery and reduced the mortality of ovariotomy. It is well known that when, after recovering from the shock of the operation, patients do badly, both the symptoms and the lesions are those of diffuse suppurative peritonitis. It has been pretty well determined of late that this condition is the result of septicæmia instead of injury to the peritoneum by the operation. Hence the great reduction of mortality since operators have bestowed such painstaking care in checking hemorrhage and cleansing the peritoneum. The determination of this fact is at the basis of the recent extension of the field of abdominal section, which now includes intraperitoneal hemorrhage from gunshot and punctured wounds, as well as diseased conditions of the viscera. This knowledge has also dissipated the traditional fear concerning a movement of the bowels after abdominal section, since laxatives are administered when indicated with advantage. In the case detailed above, the bowels were maintained in a soluble condition throughout the entire progress of the case, and with manifest advantage. Mr. Lawson Tait has demonstrated that bad symptoms following ovariotomy are often dissipated by the administration of a purgative in their incipiency. Indeed, regarding the peritoneum an immense lymph-sac, he believes that purgation often acts as a substitute for drainage.[1] These views certainly are worthy of most careful consideration in view of the splendid results which Mr. Tait has achieved.

In considering various methods in ovariotomy the greatest interest has always centred upon the treatment of the pedicle. The intra-peritoneal method is rapidly superseding the use of the clamp, and the prediction made by Dr. Emmett several years ago that "the ligature will become in future the means generally employed for securing the pedicle" seems to be almost verified. The experiments of Spiegelberg and Waldeyer, made in 1868, have removed all theoretical apprehension that the distal portion of the ligatured stump would be thrown off by sloughing into the abdominal cavity, and the splendid results obtained by this method at the hands of varions operators demonstrate its superiority from a practical standpoint. The recent experimental investigations of Mears and Longstreth[1] in this country confirm the results obtained by Spiegelberg and Waldeyer, and demonstrate additional facts of the utmost practical importance.

A SIMPLE OPERATION FOR FACIAL NEURALGIA.

By J. F. HEUSTIS, A.M., M.D.,
PROFESSOR OF SURGERY IN THE MEDICAL COLLEGE OF ALABAMA.

A. E. L., an old gentleman, past seventy, of fine constitution and very healthy in every respect, except being a sufferer from tic douloureux, has consulted me several times in the last year for his complaint, and has taken the various remedies likely to benefit him, with very little relief. As he continued to suffer more and more, I advised him to let me operate on him as the only means of relief. But the neuralgia being general, affecting the branches of both the supra- and infra-orbital nerves, I could not promise him with entire confidence that an operation on the infra-orbital nerve only would be sufficient, although that seemed to be most affected. The pains would dart all over the side of the head and face at the least touch, even of a hair of the head or beard, or from the impression of a breath of air, or even from the movement of the jaws in mastication. His suffering became so great and constant, and the neuralgic attacks so severe from attempts to eat, that he began to run down from sheer exhaustion from want of food and pain.

He was so weak at the time of operation, that it was a very important matter at his advanced age to make the operation as simple as possible, consistently with the hope of permanent relief. Therefore, discarding Carnochan's operation of trephining the antrum and following up the nerve beneath the orbit and removing it; and Langenbeck's slighter one, of dividing the nerve far back in the orbit with a tenotome and drawing it out through the infra-orbital foramen, I merely cut down upon the infra-orbital foramen, and with a fine steel drill, such as dentists use, improvised of piano-wire, drilled out the nerve in its entire length, as far back as the spheno-maxillary fissure. The immediate effect of the operation was to abolish all sensation in the previously sensitive parts, and to enable him to use his jaws without suffering the darting pains he formerly had. And not only was the sensitiveness of the face relieved, but also that of the side of the head, showing that the trouble was in the distribution of the infra-orbital nerve, and that the affection of the branches of the supra-orbital was a reflex one. Barring some swelling of the face, he had no trouble afterwards. The wound soon healed, and he has been able to expose himself to the air, and to eat with impunity, and now, although, nearly two months have elapsed, he remains free from pain and is enjoying excellent health.

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[1] The Pathology and Treatment of Diseases of the Ovaries, by Lawson Tait, F.R.C.S., etc. Fourth edition, p. 315.

[1] The Intraperitoneal Method of Treating the Pedicle in Ovariotomy, with Experiments, by J. Ewing Mears, M.D., and Morris Longstreth, M.D. THE MEDICAL NEWS, October 6, 1883.

REFUSION IN CARBONIC OXIDE POISONING.

BY WM. S. HALSTED, M.D.,
OF NEW YORK.

Read before the New York Surgical Society, November 13, 1883.)

CONTRIBUTIONS to the treatment of cases poisoned by carbonic oxide, the most noxious constituent of coal and illuminating gases, are especially worthy of consideration because of the great frequency of, and mortality from, this form of poisoning. In Adolph Lesser's tables[1] carbonic oxide figures as the most common poison, and the one which yields the highest percentage of cases. Refusion of blood is literally a depletory transfusion, in which the blood withdrawn is returned to the circulation of the loser. Volkmann,[2] in discussing exarticulations at the hip-joint, suggests the feasibility of catching the blood lost, peradventure, in this operation, and returning it to the loser through the divided femoral vein; and Esmarch[3] has, in one instance, endeavored to act in accordance with Volkmann's suggestion, but his patient died while preparations were being made for transfusion. Hueter,[4] in frost gangrene of both feet, transfused centrifugally three hundred and fifty cubic centimetres of the patient's own blood, defibrinated, into the left posterior tibial artery; and believes that he thereby preserved a portion of the frozen part. The right foot, untransfused, underwent an extensive forfeiture. Highmore,[5] evidently not aware that it had already occurred to others to refuse blood, offers "remarks on an overlooked source of blood supply for transfusion in post-partum hemorrhage," and recommends utilizing the blood lost by the mother. Other than these, I know of no hints as to attempts at refusion.

In carbonic oxide poisoning refusion involves an additional factor; viz., the oxygenation of the poisoned blood employed; and is, therefore, an infusion of the purified, defibrinated for the poisoned, entire blood of the individual.

A most radical case of refusion is the following:

On the 15th of last May, Mr. A. S. G., aged 57, a man of medium size and good physique, was found unconscious in a state-room of the steamer "Bristol" by the ticket-taker, who observed a strong smell of gas in the room. He was taken in an ambulance to the Chambers Street Hospital, where he arrived at *9.5 A.M.* The house-surgeon states that, on admission, the patient could not be aroused. Respiration superficial; pulse fairly strong, and eighty-five beats a minute; temperature not taken; skin pale and cold; lips slate-colored; pupils somewhat dilated. Was put in a hot-air bath, and given whiskey hypodermically. At *10.30 A.M.*, when I first saw the patient, he was still comatose. His eyes were partly open, and his pupils equal, slightly contracted, and irresponsive to light; face ashy pale, and surface of body cold. The respirations, twenty-eight a minute, were abdominal, and so superficial that it was almost impossible to count them. Pulse 96, small, and easily compressible; feeble conjunctival and plantar reflexes; other superficial reflexes absent, except cremasteric on left side. Deep reflexes could not be tested because of the rigidity which existed. Both arms were flexed—the right more strongly than the left. *10.50 A.M.* Right radial artery exposed above wrist for about one inch, and two ligatures passed under it. A canula, introduced centripetally into the artery, was held in place by one ligature; the other was used to occlude the vessel peripherally. Through the canula five hundred and twelve cubic centimetres of blood were withdrawn, defibrinated, strained, and kept at a temperature of about 37.5° C. in a transfusive apparatus similar to that which is before you. *11.30 A.M.* Temperature 35.4° C., pulse 92; respiration 22, full and dyspnœic. Superficial reflexes well pronounced; eyes closed; but patient can be made to open them. Rigidity of limbs has, in great measure, disappeared. *11.32 A.M.* Two hundred and eighty-eight cubic centimetres of defibrinated blood, all that could be obtained from the five hundred and twelve cubic centimetres, were refused through the canula in the artery towards the heart—centripetal arterial infusion. At *11.45*, the injection was completed. Temperature 36.6° C., pulse 104, respiration 28, deep and labored. Superficial reflexes possibly exaggerated. The usual post-transfusion rigors lasted for half an hour. *12.35 P.M.* Three hundred cubic centimetres withdrawn, as before, through the canula, defibrinated, and mixed with one hundred and twenty-eight cubic centimetres of defibrinated blood taken from another patient. *1 P.M.* Temperature 38.2° C., pulse 128, respiration 28. *1.5 P.M.* Patient's pallor most striking; one hundred and ninety-two cubic centimetres of the mixed blood infused. The color returned rapidly to his face when from eighty to one hundred cubic centimetres had been injected, the change from a deathly white to a healthy red taking place in a few seconds. *1.13.* Temperature 39.1°, pulse 120, respiration 40. *2.30.* Temperature 39.4°, pulse 140, respiration 40. *5.30.* Temperature 37.8°, pulse 116, respiration 20. Patient has been gradually returning to consciousness since the first venesection, and now attempt to get out of bed.

May 6.—12.15 A.M. Urine voided voluntarily for the first time since admission, it having previously been drawn off with a catheter. *8.30 A.M.* Temperature 37° (normal), pulse 98, respiration 20; patient in good condition, but, mentally, still a little dull. *4.30 P.M.* Patient eats well, and desires to go home.

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[1] Virchow's Archiv, lxxxiii. 2, p. 193, 1881.

[2] Drei Fälle von Exarticulation des Oberschenkels im Hüftgelenke, R. Volkmann, Deutsche Klinik, 1868, p. 382.

[3] H. Leisrink, Ueber die Transfusion des Blutes, Volkmann's Sammlung klinischer Vortrage, No. 41; Landis, Die Transfusion des Blutes, p. 327.

[4] E. Peters, Die Arteriele Transfusion und ihre Anwendung bei Elfreirung. Griefswald, 1874.

[5] Lancet, 1874, 1, 89.

7th.—Intellect perfectly clear; remembers that the steward lighted the gas in his state-room about 9.30 P. M. the night previous to his poisoning, but that it went out as the door was closed. Undressed himself in the dark, went to bed, and can recall nothing of the night. Has experienced none of the unpleasant after-effects of the poisoning. Allowed to go home about fifty hours after admission.

Oct. 20, five and a half months after the poisoning, interviewed Mr. A. S. G., and ascertained that he has not had a single unpleasant symptom referable to the effect of the gas.

That this patient would have recovered without such active treatment, is not improbable. It is, nevertheless, certain that the bloodletting exerted a most favorable influence, changing almost instantly the entire aspect of the case. The scarcely perceptible respirations became at once conspicuously full; in a few moments the absent superficial reflexes had returned, and the rigid arms relaxed. The body surface grew gradually warmer, and after the first infusion the temperature had risen from 35.4° C. to 36.6° C. (a rise of 3° F.). The pulse and respirations kept pace with the temperature. The first infusion prepared the subject for a second depletion, and contributed to the rise in temperature, and probably to the improved circulation. The second infusion was decidedly indicated, as evidenced by the impression it produced in the patient's color.

In the light of Kühne's[1] experiments on animals, it is a question whether the bloodletting alone would not have rescued all the cases of gas poisoning in the human subject in which a depletory transfusion has been successful. Kühne (*loc. cit.*) found that venesection of itself could save life if the respirations were as much as two in a minute. From twenty-three cases of transfusion for carbonic oxide poisoning of which I have notes, twelve terminated favorably. In two (Casse,[2] Lühe[3]) of the twelve successful cases, very small quantities of blood were transfused, and without any immediate good effects. In one (Hüter[4]) of the remaining two cases attempts at depletion were unsuccessful, only a few drops of blood having been withdrawn. In three cases (Garrigues,[5] Halsted) the venesection exerted a decidedly favorable influence. Three cases (Bodt,[6] Mastus,[7] Lehmann[8]) are narrated in articles to which I have not access, and so cannot arrive at any positive conclusions as to which was the more efficacious agent, the venesection or the transfusion. In one case (König[9]) the venesection (the amount of blood withdrawn is not stated) was attended with slight, and the transfusion with no success. The two remaining cases (Jürgensen,[1] Saltzmann[2]) were apparently benefited by the transfusion, and yet in neither is any reference made to the influence of the depletion, although from one (Jürgensen) four hundred cubic centimetres, and from the other (Saltzmann), one hundred and eighty cubic centimetres of blood were abstracted.

Some, then, of the cases claimed for transfusion seem attributable to the venesection which preceded it; and in no instance has it seemed to me clearly demonstrable that transfusion has saved life where venesection had failed.

A few cases are reported by O. Kahler,[3] P. Martin, and others, of venesection in carboxysmus with good results. And of the several cases which have come under my care, I will cite briefly, in proof of the efficacy of venesection, the most serious one in which depletory transfusion was resorted to.

May 5, 1882, at *10.10 A.M.*, Lillie Kent, a robust girl of seventeen, was admitted to the Chambers Street Hospital, suffering from illuminating-gas poisoning. The night before, on retiring, she is supposed to have blown out the gas in her state-room, on the steamer "Providence." On admission, she is said to have been unconscious, moaning, and much cyanosed. Her respirations were shallow, and her pulse rapid and feeble. Temperature not taken. Whiskey and digitalis were given hypodermically. She was put in a hot-air bath, and hot cloths were applied to the præcordia. Flagellation and the inhalation of ammonia would partially arouse her. Artificial respiration was tried, but with what effect is not stated. She would improve temporarily under the treatment, but when left alone would return to her previous condition.

I saw her about *5 P.M.*, her temperature was 39.1° C.; respiration 40; pulse 120. Advised washing the stomach and large intestine with hot water for the purpose of further stimulation. *9 P.M.* Patient much worse, pulse feeble, more rapid and intermittent; respirations very superficial; conjunctiva insensitive, and all reflexes absent. Mouth frothy; occasional facial twitchings and grinding of the teeth; arms and legs rigid—the flexor muscles overpowering the extensors. *9.5 P.M.*, two hundred and four cubic centimetres of blood withdrawn from left basilic vein. Upon this the condition of the patient improved marvellously; almost instantly her respirations became full, and her pulse strong and less rapid. The rigidity of her limbs disappeared, her reflexes returned, and she could be aroused by shaking or speaking loudly to her. *11 P.M.*, attempted to transfuse entire blood from a

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[1] Centralblatt f. Chirurg., 1864, No. 9.

[2] Presse Med., Bd. xxviii., 1876.

[3] Transfusion bei Kohlenoxydvergiftung mit günstigem Ausgang. Deutsche mil. aertzl. Zeitschr., Berlin, 1878, vii. 263–267.

[4] Ber. klin. Wochenschr., 1870, No. 28.

[5] New York Medical Record, March 3, 1883.

[6] Bodt. Verhandlungen d. Berl. Med. Gesellschaft, 1, 1866.

[7] Massmann (B. W.). Beiträge zur Casuistik der Transfusion des Blutes, Berlin, 1870.

[8] Massmann (*loc. cit.*).

[9] Evers. Deutsche Klinik, 8, 9, 10, 1870.

[1] Berl. klin. Wochenschr., 1871.

[2] Fall af hoggradig Kolosforgiftung behandlodt med Transfusion. Finska Läkaresällskapetts Handl., Bd. 19, p. 266.

[3] O. Kahler. Virch. Jahresb , p. 420, 1881.

P. Martin. Jahrsschr. f. d. Med., xxv. p. 197–224, 1864.

Henrik Densen in Helsingför. Hospital studien, 2. R. I. 25, 26, 1874, reports a fatal case of gas-poisoning, which was interesting from the fact, that decided reaction was observed during a brief menstruation. (Strange that venesection was not suggested to him by this occurrence.) Tauz, in Biel. Schweiz. Corr., Bd. 12, p. 324, 1871.

Behiew apparatus into patient's right cephalic vein, but failed to introduce more than thirty cubic centimetres.

6th.—During the night, nourishment was administered per rectum. At *6 A.M.*, patient answers questions somewhat intelligently, and at *9 A.M.* takes nourishment by the mouth.

7th.—Feels well, but weak.

It is difficult in any case to know precisely how much of the cure should be attributed to the treatment. When, however, a case like the one just narrated, observed sufficiently long to exclude fluctuation, assumes a decidedly more serious aspect, and then is almost instantly on treatment transformed into rapid convalescence, one feels justified in assigning a cause to the effect.

Many apparently severe cases of carbonic oxide poisoning are recorded which have recovered more or less promptly when exposed to fresh air and stimulation. Some, too, where oxygen[1] is believed to have hastened the convalescence. But if, despite these measures, the patient's condition grows constantly worse, death is virtually certain unless venesection be resorted to.

From the hour of her admission until she was bled—eleven hours—Lillie Bent's condition was growing gradually worse, and ultimately became so bad that her case seemed hopeless: this, in a moment, upon venesection, was transformed into one of apparently certain recovery.

The transfusion produced no appreciable effect, as might have been expected from the small amount of blood injected. As additional proof of the value of bleeding in carbonic oxide poisoning, I might allude to the case of her illicit companion, who, occupying the state-room with her, was likewise poisoned. Less seriously affected by the gas, he was venesected while convalescing. Maniacal and confined in a strait-jacket, he was bled about five hundred and twelve cubic centimetres, and thereupon became so rational and docile that it was no longer necessary to restrain him. To cite, as I might, other less serious cases, in which the beneficial effect of bloodletting was less strikingly apparent, would be superfluous.

Why, then, transfuse if venesection accomplishes so much? If, for no other reason, to allow of repeated venesection, the poisoned individual should be bled freely, unless there be decided contraindications, even after, to all appearances, out of danger, in the hope of diminishing the risk of pernicious after-effects.

Although bleeding of itself will probably suffice to save life in almost all cases which occur in practice, it has been demonstrated by Kühne (*loc. cit.*) that animals poisoned beyond hope of rescue by venesection, can be saved by transfusion. In one of his experiments, where respiration had been suspended seven minutes, he was still able to restore life to the animal by the infusion of defibrinated blood. Aside from experimental demonstrations of the value of transfusion in cases beyond recall by means of bleeding, nothing could be theoretically much more enticing than the plausibility of substituting blood corpuscles, capable of taking up oxygen for such as are incapacitated from so doing by reason of the somewhat (stabile) compound which carbonic oxide forms with their hæmoglobin. Thus the much quoted and meritorious experiments of Panum[1] have led his partisans to believe in the possibility of blood substitution, and to regard the blood corpuscles as something which can be taken from one individual and *transplanted* in another.

But Von Ott[2] has shown the falsity of Panum's deductions inasmuch as he could obtain like results, although making use of a fluid which contained no morphological elements.

Von Ott (*loc. cit.*) has demonstrated, furthermore, that blood corpuscles infused into the circulation are short-lived, and that blood, whether entire or defibrinated, for other reasons is not only no better than, but not as good as, a 0.06 per cent. saline solution for transfusion in acute anæmia. One can not, therefore, properly speak of a substitution or transplantation of blood corpuscles by infusion of them into an impoverished circulation.

Fortunately, however, in carbonic oxide poisoning, it is merely necessary to sustain the patient artificially for a brief period, and for this, undoubtedly, the infused corpuscles can serve as oxygen carriers for a sufficiently long time. For the circumstances, as Von Ott's (*loc. cit.*) experiments teach us, that the infused corpuscles do not become integral constituents of the new organism, but rather are destined to a more or less rapid disintegration and elimination, does not prevent them from circulating, and temporarily taking part in the interchange of gases. Clear, then, as are the indications for transfusion auxiliary to venesection in the treatment of the cases under consideration, the extreme difficulty of obtaining blood at all, to say nothing of sufficient quantity, has, up to the present time, classified the operation with the rarer therapeutic procedures. And we might, indeed, in the treatment of these cases content ourselves with bloodletting, were it not that the practicability of refusion removes what has been, perhaps, the greatest obstacle to the performance of transfusion. To the investigations of Hermann,[3] Donders,[4] and Podolinski, I owe the conception of refunding the purified for the poisoned blood of the victim to carbonic oxide poisoning.

Hermann[5] calls attention to the fact that nitrogen monoxide can liberate the carbonic oxide of the carbonoxyhæmoglobin, and forms a stronger combination with hæmoglobin than does carbonic oxide. And subsequently, Donders (*loc. cit.*), Hermann, and Podolinski (*loc. cit.*) find that oxygen, as air, can, in a few minutes, free carbonic oxide from hæmoglobin if passed forcibly and in large quantities through the poisoned blood.

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[1] Virchow Jahresber., 1869, 1320. Two Cases of Poisoning with Illuminating Gas Successfully Treated by the Inhalation of Oxygen. By Alonzo Clark. New York Med. Journ., Aug. 11, 1883. Lockey Stewart, Brit. Med. Journ., Sept. 25, 1875, p. 392, Case of Carbonic Oxide Poisoning in which the Inhalation of Oxygen exerted no Influence upon Patient's Condition.

[1] Archiv f. path. Anat. u. Phys., 1863.

[2] Archiv f. path. Anat. u. Phys., 1833, p. 114.

[3] Archiv f. Phys., v. p. 24.

[4] Archiv f. Phys., vi. p. 553.

[5] Archiv für Anat. u. Phys., 1860.

As to the best method of infusing fluids into the circulation, good authorities disagree. Of the four possible methods, centrifugally or centripetally into an artery or vein, the question of centrifugal venous infusion is entertained only to be discarded. Hueter, who gives to Von Graefe the honor of being the first to draw attention to centrifugal arterial infusion, deserves the credit of having introduced it to the profession, and strongly advocated the method.

Landois,[1] too, while contrasting in general arterial with venous transfusion, prefers, from a physiological standpoint, the arterial—be it centripetal or centrifugal.

Cohnheim,[2] on the other hand, expresses himself decidedly against centrifugal arterial transfusion, essentially as follows: One should surely, under no circumstances, inject peripherally into an artery; for the peripheral arterial branches contract with such energy against the foreign blood which is entering them, that it is often necessary, in order to overcome the resistance, to exercise pressure sufficiently forcible to rupture the bloodvessels. The case is very different when one injects centripetally into an artery, and employs no more pressure than is required to overcome the existing arterial tension. The blood infused mingles at once with that which is already present in the artery, and flows without resistance into the first branch above, thence into its arterial and capillary ramifications, and from here on, under normal venous pressure, to the heart.

Kümmel,[3] Schede's assistant, produced gangrene at the hand by the centrifugal infusion of a saline solution into the radial artery, thus giving us a demonstration of a disaster which may attend this method, and which he might have foreseen.

We are then restricted to the choice between centripetal arterial and centripetal venous infusion.

Hüter's[4] arguments for peripheral or centrifugal arterial transfusion, hold good for centripetal arterial infusion. He prefers the arterial to the venous transfusion, because the blood by the former method courses slower and more uniformly to the heart; because the minutest air vesicle is retained in the capillaries, and because the danger of phlebitis is avoided.

Landois (*loc. cit.*) adds to these advantages another, viz., that the capillary system, like a supplementary filter, catches all foreign particles which may be present.

The essential advantages of centripetal arterial transfusion in profund asphyxia, says Landois, can be summed up as follows: 1. Arterial blood is thus most directly dispatched to the nerve centres, in consequence of which the venous blood there contained, is propelled onwards into the veins. 2. The filling of the arterial system rejuvenates the feeble circulation by creating a considerable difference in pressure between the arterial and venous systems.

Cohnheim (*loc. cit.*), too, from his experiments on animals, declares the central or centripetal arterial transfusion to be the least dangerous, and at the same time the most completely effectual procedure.

From a practical standpoint, I am also impelled to advocate centripetal arterial infusion.

Besides the case already narrated, it has been my good fortune to transfuse by this method with most brilliant and unexpected success in two cases; one of acute anæmia, and one of septicæmia.

Joseph Hart, aged eleven years, was admitted to Roosevelt Hospital, September 15, 1882, for a compound comminuted fracture of the tibia and some of the tarsal bones. The ankle-joint was involved in the injury, and the soft parts badly mangled. The wheel of a street car had passed over his leg the night before. Patient is said to have lost much blood, and the clothes in which his leg was wrapped furnished evidence to that effect. The parents would not consent to an amputation, and the boy, although perfectly conscious, and able to give an account of himself, was not in condition for it.

At 8.30 P. M., eleven or twelve hours after admission, the patient was cold and unconscious, and his pulse was so rapid and feeble, that it could not be counted satisfactorily. It was estimated to be about one hundred and eighty per minute. I injected one hundred and ninety-two cubic centimetres of a chlor-natrium solution — ClNa ℥j; H_2O Oj — centripetally into the left radial artery, thereupon the pulse became quite full, and one hundred and thirty-five a minute. The boy returned to consciousness, and his condition seemed to warrant an attempt at amputation—permission to do so having, meanwhile, been obtained. The administration of ether had such a bad effect on the pulse that the operation was deferred, and the leg placed in a hot-water bath. Patient continued to improve, and survived an amputation of the leg performed by Dr. Sands, twenty-five days after admission.

On the 18th of March, 1883, at Ward's Island, I infused defibrinated blood centripetally into the radial artery in a case of septicæmia. The patient, an Italian, about forty years of age, had suffered for several months from a suppurative disease of the ankle and some of the tarsal joints. For about one week prior to the operation he had, almost daily, well-pronounced rigors and a temperature ranging from about 36.1° C. to 40.6° C. He was so feeble that to amputate was deemed inadvisable, even as a last resort. A depletory transfusion was accordingly undertaken. A stout philanthropic German offered to furnish the blood. So plentiful was his subcutaneous fat that not a vein could be seen, although his arm had been carefully constricted below the point at which the basilic vein usually perforates the deep fascia. Dissection for a vein, prolonged until even the would-be donor appeared to be willing to have the search discontinued, failed to discover one. Thereupon the radial artery was exposed without difficulty, although our subject fainted as the incision was being made through the integument, and so necessitated the completion of the operation upon the floor. The Italian was next depleted through his right radial artery until the arterial tension was barely sufficient to throw a jet across the graduated jar into which one hundred and seventy-eight cubic centimetres had been allowed to flow.

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[1] Die Transfusion des Blutes. Leipzig, 1875.

[2] Vorlesungen über Allgemeine Pathologie, Bd. i. p. 424.

[3] Centralblatt f. Chirurg., 1882, No. 19.

[4] Langenbeck's Archiv, Bd. xii.

Immediately thereupon one hundred and eighty-six cubic centimetres of defibrinated blood were infused centripetally into the artery. In a few moments, the patient's pulse had fallen to one hundred and twenty, which was eight beats better to the minute than before the administration of ether. The leg was then amputated just below the middle. The patient's pulse was 112 to 114, weak, but regular, and better than before the amputation.

Cardiac stimulants were of course freely administered, slight post-transfusion rigor, and a temperature of 38.8° C. On the following morning, March 18th, the patient's pulse was 110, and temperature normal; since then, uninterrupted convalescence.

It is only just to add that I have once done centripetal arterial infusion in a desperate case of pyæmia, where the fatal termination was probably precipitated by the operation.

If the infusion of defibrinated blood influenced unfavorably the action of the heart, it certainly was, in part, to be explained by the too heroic depletion which preceded it. This unsuccessful attempt should not militate against the method of injecting the blood, but rather against the indication for so doing, or against the manner or extent of the depletion. The main argument of those who prefer centripetal venous to centripetal arterial infusion is that the former is the simpler. If it be true that the latter is, in any degree, the safer method, the simplicity of the former does not deserve to be considered. For surely one would not feel justified in allowing a patient to die because he believed it to be simpler to do nothing than to make an exertion to save life Furthermore, instead of being easier, I am sure that it is often more difficult to discover a vein than to expose the radial artery. It was, for instance, impossible to discover a vein in the stout German referred to in this paper.

Jennings,[1] too, one of the more recent advocates of the intravenous method, without having practised the arterial, had considerable difficulty in finding a vein in one instance; and others testify to the same experience. The dangers of intravenous infusion, such as the introduction of air and small clots, and the overpowering of the heart by a too rapid injection, may be, theoretically easy to avoid, but practically death has frequently been brought about by one or more of these causes. To the centripetal arterial infusion pertain, theoretically, none of the dangers which, practically, in the intravenous method, are far from always to be avoided. And from a practical standpoint my cases, which I believe are the first recorded, induce me to advocate the centripetal arterial method.

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[1] Transfusion, p. 26, London, 1883.

HOSPITAL NOTES.

MEMORIAL HOSPITAL, ORANGE, N. J.

(Service of Dr. William Pierson.)

POPLITEAL ANEURISM CURED BY PERSISTENT COMPRESSION.

Reported by John H. Bradshaw,
assistant house surgeon.

Conrad A., age 49; carpenter. History and condition on admission to hospital, July 4, 1883:

A month before admission, patient sustained a fall. He says that, in the erection of a building, he fell through the floor beams; but, straining every muscle, he caught himself in time to be saved from further immediate injury than a severe shock. Two days after this, his attention was called, for the first time, to a lump behind his knee which has increased in size up to the day of entering Memorial Hospital.

Patient is a strong, hearty man, temperate, not subject to any cachexia, and having no history of hereditary disease. Situated in the left popliteal space is a tumor about the size of a goose-egg. This is circumscribed, compressible, and has a marked distensile pulsation.

Pressure on femoral artery lessens the pulsation and size of tumor. Direct pressure upon the swelling diminishes its size. A distinct bruit can be heard.

There is no cardiac trouble. Pulse 72, full and strong. Appetite good. Digestive functions in good order. There are no renal symptoms.

Diagnosis made of sacculated popliteal aneurism, and a trial of the treatment by flexion determined upon. Accordingly, the limb was strongly flexed at the knee and hip, and bound in that position. For twenty-six days this treatment was kept up. During that time, the tumor had diminished in size one-half, had become hard and tense, but still pulsated. The pulsation, however, was very much less than at the start. The tumor had become divided into two—one above and one below the fold of flexion. For most of the time the patient had kept the leg flexed by his own efforts, with no bandage. For a few days during this period, slight œdema of the foot appeared, which passed away after bandaging the leg. The only change in the treatment consisted in the use of a small compress of cloth, upon which the leg was flexed a portion of this time. Full diet was allowed the patient. His appetite had been good, and for most of the time he had wheeled himself about in his chair.

On the twenty-seventh day after being admitted, combined digital and instrumental compression was resolved upon. The instruments used were a conical weight of about seven pounds, suspended from above, and a Signorini tourniquet. Digital compression was made over the femoral artery, as it passes over the pubic bone, and this was supplemented by the tourniquet or weight placed upon the superficial femoral artery. The compression, which was continued for ten hours, was changed in method only as made necessary by discomfort of patient and attendants.

Throughout the entire operation, the aneurism was under constant surveillance, and whenever pulsation was perceived the compression was so adjusted that the throbbing ceased. The pain and discomfort of the operation were borne by the patient without anodyne or hypnotic.

At the end of the ten hours' compression, very little pulsation in the aneurism was to be felt. The tumor was smaller and harder than before the operation. Flexion at once was resumed and continued for twelve days. At the end of this period, a cure not having been accomplished, patient was again subjected to compression, but no weight was used. As before, relays of operators kept up digital compression—this time for twelve hours. The tourniquet was also used. The result was not entirely satisfactory, and after keeping the leg flexed for two weeks more, the same operation was undergone for the third time. The duration of the treatment this time was twelve hours. Four days after, the tumor still pulsating, though feebly, compression was once more tried for half a day. No tourniquet was used this time, but digital compression alone employed. There were relays of operators of about fifteen minutes each. The report of the day following says that the aneurismal tumor was without pulsation, hard, and very small. An elastic bandage was put on the leg, and continued up beyond the tumor, and the patient was permitted to go home for a few days; but the tumor began to pulsate once again.

On September 14, seventy days after entering hospital, patient was called back to hospital, it being thought probable that the Hunterian operation would be a necessity. With no small gratification, the tumor appeared small, hard, and without the slightest tremor of pulsation. On the same day, patient was discharged, cured.

Two months after leaving hospital, patient reports that since date of departure he has never observed any pulsation in tumor, which is very small and difficult to find. He has worn an elastic bandage most of this time. He has returned to his work.

Remarks.—The above case shows a cure resulting from compression persistently employed. Compression in all its forms was tried—flexion, direct compression by compress, digital compression, instrumental compression, and, finally, the rubber-bandage.

The duration of the treatment, although longer than many cases treated by digital compression, had, we think, in this case, not a little to do with the successful issue; for sufficient time was allowed for dilatation of vessels; for the conveyance of collateral circulation; time also was allowed for laminæ formation in the sac, which formation was eventually to close its cavity.

Attention is called to the fact that the patient comprehended the *rationale* of the treatment, and intelligently assisted it in every particular. It is noteworthy that there was an absence of unpleasant symptoms; that no medicine was administered; and that full diet and good health were preserved during the treatment.

MEDICAL PROGRESS.

Pilocarpine in Severe Hiccough.—Dr. Ruhdorfer, in the *Allg. wien. med. Zeit.*, No. 38, 1883, reports a severe case of the above, lasting for three months, and which morphia, given hypodermically, could only check for a few hours or days. It resisted all the usual remedies, such as quinine alone and with extract of belladonna, tincture of castoreum, or tincture of valerian, in water or with aromatics, mustard poultices over the stomach, dry cuppings down the spinal column, chloroform, ether, zinc, bismuth, numerous emetics and purgatives. The patient dragged on for three months under various remedies, morphia being administered whenever a single attack lasted beyond eight hours. At last the attack became overpowering, and the hiccough was so loud that the patient could be heard outside the house, through two doors. She sat up in bed, supported by her parents; there were dyspnœa and cyanosis, the head was jerked in all directions, the pulse was small and frequent, the neck was distended. Remembering a case in the *Revue Médico-Chirurgicale*, Dr. Ruhdorfer injected a solution of pilocarpine hydrochlorate (three centigrammes in a gramme of water; gr. ss–♏xv). The hiccough was at once cured, as if by magic, and has never returned since.—*British Medical Journal*, Nov. 17, 1883.

The Cure of Hydrophobia.—Gingeol has recently made a communication to the Académie de Médecine of Paris on this subject, with the following conclusions: 1. There is reason to believe that clinical experience will verify the opinion as to the good effects of hoang-nan in the treatment of hydrophobia. 2. The oriental practice, which consists in administering the drug per orem, should be rejected on account of the dysphagia and the eventual vomiting. 3. The drug can be better administered by the subcutaneous injection of an aqueous solution—1 to 10—of the alcoholic extract, or an alcoholic acetous preparation, every ♏xv of which represent probably the active principle of three of the pills recommended, and given by Tong-King. 4. The maximum dose of the preparation can not be formally indicated, but must depend upon the indications.—*L'Indipendente*, November 15, 1883.

The Action of Chlorate of Potash.—M. Mering has recently made some experiments on this drug, basing his results on recent researches. He draws the following conclusions:

1. Chlorate of potash traverses the organism for the greater part, without undergoing any alteration.

2. In a mixture of blood and chlorate of potash, methæmoglobine is formed; at the same time a part of the chlorate of potash is reduced.

3. The addition of an alkaline base retards decomposition of the blood; addition of carbonic acid accelerates that decomposition.

4. Chlorate of potash causes more rapid decomposition in non-oxygenated blood than in arterial blood.

5. The deleterious action of chlorate of potash is manifested principally when the salt is absorbed by an empty stomach, and when its elimination is insufficient. —*Gaz. Méd. de Paris*, November 17, 1883.

The Changes in the Spinal Cord after Arsenic, Lead, and Mercury Poisoning.—Dr. N. Popow, after a number of experiments on this subject in the clinical laboratory of Prof. Mierzejewsky, with subsequent microscopic examinations, draws the following conclusions:

1. Arsenic, lead, and mercury, produce marked changes in the cord in acute cases of poisoning, which must be regarded as having the character of acute central myelitis.

2. In proportion, as the cases are protracted, these changes are not merely confined to the gray substance, but invade the white substance of the cord and produce changes similar to those seen in a diffuse myelitis.

3. The peripheral nervous system is completely unchanged by a rapid action of these poisons.

4. The clinical symptoms on the part of the nervous system, observed during rapid poisoning by these substances, *e. g.*, cramps, paralysis, pains, and anæsthesia, are fully explained by the morbid changes found in the spinal cord; and no one of these symptoms can be attributed to an affection of the peripheral nervous system.—*Virchow's Archiv*, Bd. xciii. Heft. ii.

Paracentesis of the Pericardium.—Dr. J. W. Macdonald read the report of this case before the Canada Medical Association.

He was called to see the patient, a married woman, aged 30, on the evening of June 10, 1883. She stated that, three weeks previously, she had been seized with severe pains in the joints, attended with high fever. A day or two afterwards, she complained of pain and violent beating at the heart.

Condition on June 10th: She was unable to lie down with comfort; the face was pale, anxious, and slightly œdematous; the breathing was short and panting; the heart's action tumultuous, and its movements could be perceived through her clothing. On examination of the chest, a dull area was found over the præcordial region, extending from the right edge of the sternum towards the left for about eight inches, and from the seventh intercostal space to the level of the upper margin of the second rib. A loud and distinct to-and-fro murmur at the apex, and a harsh systolic murmur at the base, were the sounds heard on auscultation. The lower lobe of the left lung, posteriorly, was very dull on percussion, and conducted the heart-sounds, so that the murmurs could be very distinctly heard in this situation. Over this area, there was also puerile respiration and increased vocal resonance. A narrow strip, giving normal sounds on percussion, extended down the side from the axilla, and divided the dull areas in the front and back of the left chest. The pulse was small, irregular, and 120 per minute. She was troubled with diarrhœa.

Blisters, iodine, and diuretics were employed, and for a few days the fluid diminished; but the symptoms became aggravated, and the dyspnœa and agony about the heart became unbearable. To use the patient's own words, she felt, "as if the heart was going to burst." She could get no rest except when propped upright, and she frequently fainted. The diarrhœa continued, and, in the hope that it might promote absorption of the effusion, he made no attempt to check it.

On June 18th, he resolved to operate, a point one inch below the nipple, and close to the lower margin of dulness, being fixed upon: first, because no heart-impulse could be felt there; and, second, because it was at the most dependent part of the pericardial cavity. The patient was placed in a semi-recumbent position; chloroform was very cautiously given; and the mamma was held up out of the way. He then made a preliminary incision through the skin, and dissected down carefully between the ribs. No impulse being felt by the finger in the wound, he pushed a moderate-sized aspirating-needle through the remaining tissues; and, feeling that he had entered the cavity, withdrew the stilette. A few drops of greenish-looking fluid escaped; but it appeared impossible to get it to run freely, even after applying the aspirator. Just as he was preparing to enlarge the opening, for the purpose of introducing a tube, the fluid began to run freely; and, on the patient drawing a full breath, it escaped in little jets. After persevering for some time, the cavity was emptied; the dull area over the heart was reduced to its normal size; and the patient, though extremely weak and inclined to faint, was very greatly relieved. The fluid withdrawn measured thirty-two ounces; was of a greenish color, resembling bile; and tended to coagulate on cooling. Shortly after the operation, she could lie down with comfort on either side, and draw a deep breath without inconvenience. The pulse fell to 100, and became more firm and regular.

The patient recovered rapidly.—*British Medical Journal*, October 27, 1883.

ACCESSORY SUPRARENAL CAPSULES IN THE BROAD LIGAMENTS.—MARCHAND has encountered six cases in new-born infants, in which there were accessory suprarenal capsules in the broad ligaments. They were in the form of small yellow bodies, rounded, and situated in the thickness of the broad ligament, near its free border in the vicinity of the ovary. They measured from one to three millimetres in diameter. In one case there were two of these bodies near together. That they are really adrenals is recognized by their histological structure: They are seen, on examination, to be made up of layers of epithelioid cells separated by vessels joining in a common trunk. The pigmentation of the suprarenals, however, is absent. The existence of similar elements may be explained by the vicinity of the suprarenal capsules relatively well developed, and the communication with the embryo of the internal spermatic or ovarian vein.—*Virchow's Archiv*, Bd. xcii. Heft 1.

PORRO OPERATION.—On September 30th, PROF. M. FRARI performed a Porro operation at the Instituto Ostetrico at Padua, on account of rachitic deformity. The patient died of septic peritonitis on the seventh day. The child, well developed, was saved.—*L'Indipendente*, November 15, 1883.

THE HEREDITARY FORM OF DIABETES INSIPIDUS.—At the fifty-sixth session of German naturalists and physicians, DR. WEIL, of Heidelberg, presented the genealogical tree of a family of 91 persons, of whom 70 had come to adult life, and of these 23 were affected with diabetes insipidus. Of the 23 persons, 5 have died, one lived in America, and 17 were examined by Weil. There is no other hereditary disease in the family, the members of it being generally of robust constitution, and often live to a very advanced age. The grandfather lived to the age of eighty-three; one of his daughters to seventy-four; and two others to sixty-six and sixty-five.

Of the seventeen diabetics, five are aged from thirty-nine to sixty-six; two others are twenty and thirty years of age; six are from ten to twenty, and four between two and eight. All are in perfect health except for their insatiable thirst and abundant urinary secretion. The quantity of urine passed in twenty-four hours by the younger members of the family (under thirteen years of age) is between two and two and a half gallons. One, aged 42, passes about five gallons. The appetite of these persons is normal, and the digestion regular. None of them present any nervous or genital troubles. In all those affected by polyuria, the symptoms begin in infancy, attaining their maximum towards the age of twenty years, and then diminish after the sixtieth year. This polyuria persists until death; its duration, then, is undetermined, and its prognosis very favorable, unless complicated by some disease of the general health.

In answer to certain questions, Dr. Weil said that the heart and vessels were perfectly normal, that only one was addicted to alcoholic liquors, and that moderately, and that it was impossible that the affection could be due to imitation, as the disease began in early infancy, and did not affect all the members of the family. None of the subjects had succeeded in conquering the thirst by habit or force of will. One only had been treated; ergot had diminished the thirst and urinary secretion, but the patient felt the worse for it.—*Gazette Méd. de Paris*, October 27, 1883.

TARTAR EMETIC IN EPISTAXIS.—GUEDEVO has published two cases of rebellious epistaxis which were relieved by tartrate of antimony and potash. The usual remedies had been tried in these cases without any good effect, when the following mixture was resorted to: ℞.—Tartrate of antimony and potash, gr. ij; distilled water, f℥iv; simple syrup, fʒvj. Sig. Take a teaspoonful every fifteen minutes until vomiting is produced. After more or less vomiting the hemorrhage ceases.—*L'Indipendente*, November 15, 1883.

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REPORT OF THE FRENCH CHOLERA COMMISSION.

In our issue of November 10th, we presented the substance of the preliminary report of the German Cholera Commission. At the meeting of the Biological Society of Paris, held upon the same day, M. Straus reported for himself and his co-laborers—Roux, Thuillier, and Nolacq—the results of their researches in Egypt upon the nature of cholera.

Twenty-four autopsies were made—seventeen on men, and seven on women—immediately after death. The Commission confined itself to the study of the intestinal fluid, the walls of the intestines, and the blood. The minute examination of the intestinal walls, stained by methylene blue, showed a large number of micro-organisms (bacilli and micrococci), bacilli resembling those of tuberculosis. But these were not constant, and it was impossible to make any pathogenic studies. Nothing special was found in the mesenteric ganglia, the liver, spleen, or kidneys.

The most important results were obtained from the study of the blood. The dark color and defective coagulation of the blood were immediately conspicuous. Either the globules subsided leaving a clear supernatant serum, or, if coagulation took place, it was slow, and the coagulum was like a soft jelly. Microscopically examined, the red disks were spread out, pale and non-coherent; the white corpuscles were numerous, and very granular. Further, there were seen in the clear spaces between the blood globules, certain small elongated bodies, suggesting those of the acetic ferment, and like those of pig cholera, but less elongated. These were found in the blood of the twenty-four subjects examined, and were particularly abundant in the mesenteric and abdominal veins. The attempts to stain these micro-organisms were unsatisfactory; for not only did they take color badly, but their extreme minuteness made it difficult to distinguish them from the débris of white corpuscles and the precipitated particles of coloring matter. At a temperature of 100.4°, and in tubes of blood, these elements proliferated, sometimes in groups and chains, and always at the bottom of the tube, protected from the action of the air.

The Commission are inclined to consider that they have found in this micro-organism the microbe of cholera; although they admit that the only proof of such view, viz., the successful cultivation or inoculation of the organism, is still wanting. Cultures were attempted with all sorts of culture-fluids, and were alike unsuccessful. Inoculations, subcutaneous and intravenous, the introduction of fluids containing the organisms into the intestinal canal, all failed, in whatever animal employed, including the mouse, which is supposed to be peculiarly disposed to acquire the diseases of man. On the other hand, the Commission feel that failure in these experiments does not exclude the possibility of the microbe in question being that of cholera. The suitable culture may not yet have been found, nor the animals susceptible to the germ. The microbe of malignant pustule resisted for years the most patient researches of the best observers.

Another fact noted by the Commission was the reaction of the blood of choleraics, as determined by testing the serum which separated from the globules when the blood was placed in tubes. This was found to be slightly acid in the majority of cases. And in an autopsy made half an hour after death, the pericardial fluid was also found to be acid, while the blood of subjects dead of other causes presented no such reaction.

A comparison of these results with those of the German Commission reveal wide differences. But ten autopsies were made by the latter. The blood was found free from micro-organisms, which were, however, found in small numbers in the vomited matters, and were numerous in the dejecta. On the other hand, the organism to which most importance was attached—a bacillus resembling in size and shape most nearly that of glanders—was found in the intestinal wall, in which, apparently, nothing distinctive was found by the French Commission. Both Commissions failed in inoculation experiments.

It is evident, from these most diverse results, that our knowledge of pathological mycology and its investigation is still far from that preciseness which will allow us to attach any great value to observations by whomsoever made, and upon whatsoever disease, except, probably, the parasitic skin-diseases, and one or two only of the infectious diseases—malignant pustule and relapsing fever.

WIRING THE FRACTURED PATELLA.

In the issue of The Medical News of last week, we called attention to the treatment of fracture of the patella by wiring the fragments, and analyzed all the cases which had fallen under our notice, with a view to pointing out the dangers of the procedure. Since then we have received the London weeklies of November 17th, from which it appears that important debates upon the subject have been held at the Medical and Clinical Societies of London, with the result of eliciting the opinions of many of the leading surgeons of the great metropolis as to its merits. In France, too, as we learn from the *Gazette Médicale de Paris* for November 17, and the *Union Médicale*, for November 15, the antiseptic suture of the patella was discussed at the Société de Chirurgie. The most comprehensive papers upon the subject are those of Mr. Turner, which was read at the Clinical Society of London, and which may be found in the *British Medical Journal*, for November 17, and of Mr. Macewen, of Glasgow, which is published in the *Lancet* for the same date. In these contributions, and in the discussion at the Société de Chirurgie, are contained 37 cases which were not noticed in our own columns. Our present objects in again calling the attention of our readers to the subject are, first, to add the new cases to those we have already analyzed, in order that they may reach a definite conclusion as to the risks of the procedure, and, secondly, to present the opinions of the gentlemen who took part in the discussions, in favor of or adverse to the method.

The patella has been sutured antiseptically 86 times, the surgeons having been Lister in 7 cases; Bell, Howse, Kœnig, and Macewen, each in 4 cases; Bloxam, Rose, Johnson Smith, Trendelenburg, and Wood, each in 3 cases; Cameron, Davies-Colley, Jessop, Rosenbach, Wheelhouse, and Schede, each in 2 cases, and Amphlett, Beauregard, Bryant, Bull, Cagnoli, Dicken, Fowler, Gœring, Golding-Bird, Hartwick, Holderness, Holmes, Sydney Jones, Langenbeck, Langenbuch, Lauenstein, Lloyd, Lucas-Championnière, MacCormac, Metzler, Parker, Pemberton, Poncet, Pozzi, Pye, Sabine, Schneider, Henry Smith, Socin, Teale, Timme, Turner, Uhde, Van der Meulen, Wahl, and Wyeth, each in 1 case.

In the single cases of Bull, Dicken, Sydney Jones, Holmes, MacCormac, Pye, Turner, Von Langenbeck, and Wyeth, in 1 of Bell's, in 1 of Bloxam's, in 1 of Rose's, and in 1 of Wood's, in Schede's 2 cases, in 2 of Kœnig's, and in the 3 cases of Johnson Smith, the joint suppurated. Of these, the case of Bull died of exhaustion and, probably, pyæmia; that of Wood died of pyæmia; those of MacCormac and Von Langenbeck died of septicæmia and pyæmia, after amputation of the thigh; and the case of Wyeth recovered after amputation of the thigh. The remainder got well with stiff joints. In the case of Wahl, there was partial necrosis of the upper fragment, and in one of Kœnig's, the upper fragment perished. To these ill results must be added the death of Fowler's patient from carbolic acid poisoning.

The statistics of the operation demonstrate, therefore, 23.2 per cent. of suppuration of the knee-joint; 5.8 per cent. of deaths; 2.3 per cent. of necrosis of the fragments; and 3.5 per cent. of amputation of the thigh, results which clearly indicate that the procedure does not warrant the enthusiastic estimate that Mr. Lister has placed upon it, and that it will not replace other safer methods of treatment.

The supporters of the operation are, in addition to Lister, Turner, Royes Bell, Bloxam, Macewen, and Cameron. Adams and Lucas-Championnière approve of it when practised by surgeons who are best experienced in antiseptic measures. Chauvel, Forget, Gilette, Holmes, Heath, Sydney Jones, and Morant Baker think it justifiable in some old cases in which the limb is useless, but they condemn it in recent cases; while Bryant, Gant, Morris, Owen, Verneuil, Le Fort, Richelot, Desprès, and Labbé do not consider it justifiable under any circumstances. Our own view is that it should be restricted to cases in which ordinary measures have failed to secure union, and that it should only be done, under these circumstances, by those who have had a large and successful experience in aseptic surgery.

ADVERTISING DOCTORS.

Doctors who advertise may be classified like objects in natural history. There are doctors who advertise outright and make a merit of it. They are derisively called "quacks," but they are honest quacks, and fly their own flag. There are doctors who advertise indirectly, and obtain any advantage they can in this way, without sacrificing their professional status, and who live within the letter of the Code of Ethics, if they ignore its spirit. There are, still, voluntary and involuntary advertisers—those who deliberately glorify themselves in the public prints, and those who are victims of circumstances, and are displayed in the loudest type without any agency of their own.

In a recent issue of *The Medical Times and Gazette*, of London, a leader devoted to the subject of "Medical Bulletins," declares that the prejudices existing in England "against medical men advertising themselves," may be "doomed to disappear as our institutions become more Americanized." Nothing could be more unjust. The great body of the medical profession in this country is, and has always been, immovably opposed to open or covert advertising on the part of its legitimate members. It is true the offenders have not always been disciplined, especially those who under the guise of official positions have paraded their wares before the secular public; but their conduct has none the less been severely reprobated by the great mass of medical men. There are some kinds of indirect, but quite voluntary, advertising difficult to reach by any tribunal but the common sentiment of the medical profession.

A very opportune illustration of this fact is afforded by the recent action of the Mobile Medical College. Coming into possession of a hospital, the faculty have issued a circular, setting forth the skill of their members and offering gratuitous service to the sick-poor of the State. In this case both the letter and spirit of the National Code are violated—for the claims of special skill made in the public prints, and the offer of gratuitous service, are alike condemned. These professorial advertisers evidently hope for immunity from the usual disciplinary results of such acts, because "the College" is the offender. As it is a fiction of the English law—"the King can do no wrong," so these gentlemen hope that "the College" may occupy before the profession a similar unassailable position. If a Mobile physician may not send broadcast through the State a circular offering his services as a specialist possessed of the highest skill, and agreeing to treat the sick-poor gratuitously (they must write and hear something to their advantage, before coming, however!), why should six or eight medical men, composing a College faculty, be permitted thus to violate the Code and offend the sense of professional fitness?

That form of advertising which we have called indirect, is practised to no small extent. Only a few days ago, in the columns of a New York daily, an eminent New York surgeon appears as the performer of a remarkable surgical operation, which is so described that the hand of a medical reporter can readily be traced. This eminent surgeon will, no doubt, indignantly deny his agency in the matter; but has he not some indiscreet follower, who gathers a precarious subsistence by piping up the achievements of his patron? Very recently, one of the papers of Philadelphia contained a glowing description of a private, special hospital; but the motive for this humanitarian recital was seen in the account of the medical engineer of this establishment, whose remarkable achievements in dermatological science were told in such extravagant phrase that only the insensibility of some pachydermatous animal could support the absurd flattery without collapsing. If such offenders are brought to book, we all know the defence: regret that such an unfortunate publication should have appeared; totally unauthorized; no one feels the impropriety more than the person concerned, etc. All this, and more, when the matter is given to the reporter by some attaché of the advertised great man, who, if he does not approve publicly, is secretly gratified. Much of this indirect advertising is done by reporters, who repay in this kind of cheap notoriety for services rendered.

It must be admitted that there are members of the profession who are advertised quite involuntarily, and pose in attitudes for which they have no liking. A high position, fairly won, may seem a justification for newspaper notice; but every right-minded physician must feel that such cheap applause rather hurts than helps, for through it all lurks the suspicion of contrivance or connivance.

Moral.—In this eager striving for notoriety rather than the just honors of the medical profession, do we not discern the need of maintaining a high standard of ethical requirement? Abate in any respect our regard for the proprieties of professional life, and see the consequences. Remove one stone, and the whole edifice tumbles about our ears. Allow these forms of advertising to obtain a footing of the slightest tolerance, and the newspapers will not have space enough to accommodate the multitude eager to display their wares. What, then, will be the position of the medical profession?

But, says the *Medical Record*, "the triumph of the New Code shows that medical men are growing more liberal as to interpretations of professional conduct, and that of itself is a good sign."

INJECTIONS INTO THE UTERINE TISSUE.

Dr. Schücking proposes to treat certain maladies of the uterus by injecting the medicament directly into the substance of the organ. We believe that this expedient, which he brings forward as new (*Berliner klin. Wochen.*, No. 27, 1883), has been often employed in this country. The advantages of this method are two: it is local; it causes much less pain than subcutaneous injections. The remedies so employed are ergotin, Fowler's or Pearson's solution of arsenic, tincture of iodine, carbolic acid, and some other agents. The principal diseases thus treated, are subinvolution, chronic metritis, fibroids, and some forms of displacement. For the performance of this operation the ordinary hypodermatic syringe suffices, but the needle must have the necessary length to reach through the speculum into the uterus. Only concentrated solutions are suitable, since the tissue of the organ is too compact to admit more than a few minims.

That this method is not a mere fancy, is proved by its employment in this city at the present time. We happen to know that a competent and enterprising female physician is using in this way a solution of carbolic acid, five per cent. in strength, for the relief of uterine cancer. The solution is freely injected into the tissue immediately subjacent the cancerous mass. Too short a time has transpired to permit any opinion as to the ultimate result of this method. It has, however, removed the very severe pain which the poor patients were suffering.

ANTISEPTIC SURGERY.

If additional proof of the value of antiseptic over old methods of managing wounds were needed, it would be found in the results obtained by Professor Bruns, of Tübingen, and published in a recent brochure. Of one hundred and forty-nine amputations performed between 1877 and 1882, only 5.5 per cent. proved fatal. During that period, amputation of the leg was attended with a mortality of 3.2 per cent., and of the thigh of 2.5 per cent. From 1843 to 1863, or in preantiseptic days, the same operations showed, respectively, a mortality of 29.7 and 43.5 per cent.

Equally striking results were obtained by Professor Esmarch, of Kiel, in 92 resections of the knee done between 1857 and 1882, of which a full account may be found in an inaugural dissertation by Dr. Mensing. Of 21 cases treated in accordance with old methods, 14 recovered, and 7, or 33.3 per cent., perished. Of 23 cases managed with Lister's dressing, 21 recovered, and 2, or 8.7 per cent., died. Of 48 cases treated with the antiseptic dressing of Neuber, 47 recovered, and 1, or 2 per cent., perished. In other words, the mortality of antiseptic resections was 4.2 per cent. as against 33.3 per cent. for non-antiseptic operations.

INFECTIOUS NEPHRITIS.

Infectious nephritis is the title given to that form of nephritis which is often found associated with erysipelas of the face. It has, of course, long been known that albuminuria is a frequent accompaniment of erysipelas, and although it has always been looked upon as a rather grave symptom, it formerly had no more stress laid upon it than the albuminuria of other acute diseases, as, for instance, typhoid fever and the eruptive fevers.

Since the discovery by Hueter and Nepveu, in 1868, of a microbe of erysipelas, and its more recent recognition in the blood, in the fluid of the blisters, and in the urine of erysipelatous patients, this albuminuria has been allowed a greater significance. It is now an acknowledged sign of infectious nephritis.

In an inaugural thesis recently published, Dr. Jules Bleehmann has taken up this subject, and, in addition to tracing the history of the urinary symptoms in erysipelas, has added some personal experiences, and has described the lesions and the progress of the erysipelatous nephritis. Throwing aside all other theories which have been suggested, he ascribes the nephritis to the irritant action of the poison germs upon the tissues of the kidney.

That the albuminuria accompanying erysipelas is a part of a nephritic process we satisfied ourselves as far back as 1872. The bloody urine and the epithelial and blood casts could scarcely receive any other interpretation. In view of the recent disposition to ascribe all of the inflammatory processes constituting a part of infectious diseases to a minute organism, it is to be expected that infectious nephritis should be referred to a similar origin. That it may be due to some irritating constituent of the blood in the infectious disease, just as the nephritis of scarlatina is caused by its poison in the circulation, is a very reasonable supposition. But that it is due to a microbe has not, in our judgment, been proved, and so to assert, with the present evidence, is begging the question.

TRANSFUSION OF BLOOD BY HYPODERMATIC INJECTION.

Our Italian *confrères* have manifested much ingenuity in devising methods of transfusion. The most recent contribution made by them to this subject is transfusion hypodermatically. Thus Dr. Paladini has reported a case in which complete success followed the injection under the skin of the abdomen of about 130 grammes or four ounces of blood. The case was one of menorrhagia, the patient losing so much as to faint repeatedly, although recumbent. The husband of the woman furnished the blood. By means of a hypodermatic syringe the blood was drawn from the veins of the donor, and was injected through the canula of a trocar previously introduced, and by means of which a cavity was hollowed out in the connective tissue to receive the blood. The blood-tumor thus formed disappeared in two hours, and neither induration nor abscess was produced. The hemorrhage ceased, the patient took food, and the night following slept tranquilly. The subsequent recovery proceeded without accident.

THE UNSANITARY CONDITION OF CLOSED SUMMER RESORTS.

Great evils result at many summer resorts from the way in which hotels and boarding houses are closed and left. There is generally no attempt at house-cleaning. All manner of trash is left in the cellar; pieces of meat lying on the kitchen range, and unwashed towels in the scullery; fruits and vegetables, partly decayed, are scattered here and there. As a rule, the tenant leaves as soon as he can after evacuation day, and makes no attempt to put the house in sanitary order. So long as this plan is followed, the outside cleaning by city boards of health will not be enough. The house-cleansing and carpet-sweeping company must do its work in the autumn.

REVIEWS.

Epitome of Skin Diseases, with Formulæ, for Students and Practitioners. By the late Tilbury Fox, M.D., F.R.C.P., and by T. Colcott Fox, M.B., M.R.C.P. Third American edition, revised and with additions. By T. Colcott Fox, B.A. (Cantab.), M.B. (Lond.), etc. Duod. pp. 240. Philadelphia: Henry C. Lea's Son & Co., 1883.

For the busy practitioner who cannot give that time to the study of skin diseases which is necessary to master the subject, such manuals as the present have their use. And while we consider this and all similar works little less than pernicious for the medical student, we can cordially recommend Fox's *Epitome* to those graduates whose time as well as knowledge is limited, and who wish a handy manual to lie upon the table for instant reference in the hour of need. Its alphabetical arrangement is suited to this use, for all one has to know is the name of the disease; and here are its description and the appropriate treatment at hand and ready for instant application.

The present edition has been very carefully revised by the surviving author, and a number of new diseases are described, while most of the recent additions to dermal therapeutics find mention; and the formulary at the end of the book has been very considerably augmented.

The Physicians' Visiting List (Lindsay & Blakiston's) for 1884. Thirty-third year of its publication. Philadelphia: P. Blakiston, Son & Co.

That the *Physicians' Visiting List* has reached its thirty-third year of publication is ample evidence of the high favor with which it is regarded by the profession. In its issue for 1884, it retains all the features which in past years have conduced to its popularity. The posological tables have been revised in accordance with the new Pharmacopœia, and there have been added a list of new remedies and a description of Sylvester's method of artificial respiration. This visiting list fully meets the requirements of the busy practitioner.

SOCIETY PROCEEDINGS.

NEW YORK COUNTY MEDICAL SOCIETY.

Adjourned Annual Meeting, November 26, 1883.

The President, David Webster, M.D., in the Chair.

The minutes of the Annual Meeting held October 22d having been read and approved,

the report of the committee on hygiene,

Dr. S. Oakley Van Der Poel, Chairman, which had been postponed from the annual meeting, was read by the Secretary, Dr. W. M. Carpenter.

It consisted of four parts, of which the first was a paper by Edward G. Janeway, entitled,

MORTALITY TABLES AND EPIDEMIC INFLUENCES.

The following extracts embody its more important points: The mortality for the nine months of the year ending on September 30th, has been less than in the corresponding periods of the years 1881 and 1882. It has, however, been somewhat greater, both absolutely and comparatively, as regards increased population, than that of the same period in the years 1878, 1879, and 1880. The work of systematic vaccination was commenced in 1875, and continues at the present time. Previously, spasmodic efforts were made when an epidemic was prevailing. Since that time the corps of the Board of Health charged with this work has performed 119,856 primary and 430,783 re-vaccinations, a total of 550,549. The work was initiated when a very severe epidemic of smallpox had already gained considerable headway. Aided by prompt action in removal, isolation, and disinfection, where the disease has shown itself, as well as by thorough vaccination and watching of the people in the neighborhood of the outbreak, the Board of Health has been able to hold the disease in check on the two occasions when it has since developed. There have been 780 deaths from smallpox since the end of the epidemic in 1877, a period of six years, a number of them in recently arrived immigrants. Without taking into account the fact that the city has trebled its population in the time comprised in this table, the mortality from smallpox is only one-half to one-fourth of what it was in any preceding six years, except between 1866 and 1871. Had the same mortality prevailed as in the years following 1848, instead of 780 deaths in the six years terminating with 1883, we should have read 7500. In other words, 6500 people have been prevented from dying of smallpox. Should some one object to the method of arranging the years, let him do it as he will, and yet he will find ample evidence of a strong disturbing influence operating against the development of smallpox since 1866, the year in which the Health Board was organized, and especially since 1875, the year in which a permanent corps was detailed to do this work constantly, and as vigorously when no epidemic existed as when one was present. Physicians should ever urge on this work, since, when smallpox has only prevailed to the limited extent of the six years just ending, people become careless, and persuasive vaccination by public authority becomes difficult. It is far more essential to keep up thorough vaccination now than to wait for the visitation of another outbreak of the disease, which will find its victims in the careless and obstinate.

We have commented so freely in previous years upon the statistics and their indications, that we shall dwell but briefly upon some facts which we deem of importance to keep before the physicians of this city. The tables show at a glance the fluctuating character of the mortality from measles, scarlet fever, and diphtheria; from which it seems probable that, owing to the moderate number of deaths from scarlet fever this year, we shall witness next year a marked increase of this disease; whereas, for measles, the probability is that there will be a considerable diminution. Diphtheria is on the decline, and from the previous course of the disease it is probable that this diminished mortality may continue for another year or more.

Pneumonia has produced 41 less deaths than last year, but 235 more than in 1881, and 634 more than in 1880. Bronchitis, however, has caused fewer deaths than either in 1881 or 1882. Consumption, on the other hand, caused 35 more deaths in 1882 than in 1881, and 59 more deaths in 1883 than in 1882.

The summer was so comfortable that we find a comparatively moderate mortality from diarrhœal diseases. Yet we observe that the mortality from this class of disorders is 2363 less during the last six of these twelve years, notwithstanding the increase of population by 300,000 during the time comprised. As 1872 was an exceptionally hot and fatal summer, it seems as if an unfair conclusion might be drawn from including it. We can gain a better idea by comparing 1873 and 1881, both comparatively cool summers. In the latter of these years, 16 more deaths occurred than in the former; yet the population had increased 225,000, in round numbers, and should have led us to expect an increase of 730 in the mortality. No one is more aware than the writer of the fallacies liable to occur in comparing vital statistics; yet he feels that, making all due allowance for possible error, a considerable number of lives have been saved by the result of the employment of the summer corps of the Board of Health and of the active charity of New York City.

Mortality for the Three Quarters of the Years.

From	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883
Measles.	428	251	299	116	340	119	258	126	462	347	826	634
Scarlet fever.	802	726	730	410	693	781	740	1370	277	1379	1959	648
Diphtheria.	269	681	984	1646	1427	616	726	453	743	1658	1247	758
Croup.	406	492	390	519	366	308	365	295	546	765	559	454
Whooping cough.	......	......	......	......	......	......	......	......	......	......	......	......
Typhoid fever.	264	219	176	256	207	179	155	122	163	287	229	294
Typhus fever.	73	30	9	22	18	15	4	3	1	156	63	10
Cerebro-spinal fever.	......	......	......	......	......	......	......	84	131	401	197	184
Malarial fevers.	......	......	......	......	......	......	......	299	341	451	403	411
Pneumonia.	1654	1734	1802	2149	1955	1627	1740	1845	2022	2421	2697	2656
Bronchitis.	......	......	......	......	......	......	869	892	941	1096	1218	1072
Phthisis.	3231	3138	2941	3174	3159	3029	3296	3206	3440	3908	3943	4002
Diarrhœal diseases.	4691	3740	3153	3446	3565	3235	2630	2670	3648	3756	3642	3121

Typhoid fever has made no very marked change in the past three years. The outbreak of typhus fever which began in 1881 seems terminated, as only 10 deaths have occurred from this cause during the present year. He who looks at the number of deaths which took place from this disease when it gained an entrance in New York in past years will again see the value of an actively interfering agency to prevent the spread of disease. But for the efforts of the Board of Health, the disease would have spread greatly and extended over a number of years. Instead of a mortality of 225 in the outbreak of 1881–1883, there might have been a proportional increase, according to population, over what occurred in 1848 and the following years, when more than 4500 persons died of the disease: the equivalent of which would be over 10,000 for the present time. Judging from the annals of the past, a battle in which 10,000 persons were slain would now be commemorated in history; a battle, in which perhaps more than that number of lives were saved from destruction by pestilence, is a matter not deemed of any special moment. The moral of this is, that the medical profession of New York should see that its Board of Health is properly maintained, aided, and encouraged in its work. At times in the past physicians have, from neglect or concealment, failed to notify the Board of the existence of contagious diseases, with the effect of producing an epidemic in some cases. One case of a contagious disease may seem a little matter; but, as a single spark may cause a great conflagration, so this may be the means of initiating a great epidemic. Smallpox and typhus fever are well under control at present. Let each physician who would be inclined to treat a case of either of these diseases, reflect on the possible consequences should he endeavor to do so without reporting the matter to the Board of Health. In the writer's opinion, he would be more guilty than the man who commits a simple murder. For the sake of a fee or the good-will of a family, he would take the chance of endangering a community.

The second paper was by **Dr. O. D. Pomeroy**, on

SOME POINTS IN THE HYGIENE OF THE EAR.

Some of the points touched upon were the following: To those not in good general condition there was danger of ear trouble in riding fast in the wind, and this danger was increased if the air was damp. Otitis was not infrequently caused by sea bathing, in which it might be due simply to the application of cold water, or to the violent concussion of a wave, or the irritation caused by the entrance of salt water into the nostrils or the mouth. The wearing of cotton in the ears by bathers was recommended. Bathing in the unclean water about New York City, the writer thought, sometimes gave rise to inflammation of the ear. The bad effect of loud and continuous sounds was well shown in boilermakers' deafness, in regard to the exact production of which, however, some discussion was now taking place among otologists. Railroad engineers, ship-caulkers, and telegraph operators, were all more or less subject to ear trouble. Musical sounds, however, never seemed to produce this; monotonous and discordant sounds being required. The discharge of firearms might cause deafness, either by creating such a compression of air as to rupture the membrana tympani, or by the shock to the acoustic nerve, and it was recommended that those exposed to this danger should hold the mouth open. Having spoken of the pernicious effect of compressed air upon the auditory apparatus, the writer passed on to the evils arising from violence to the external ear. Boxing on the ear was a frequent cause of deafness, and pinching and pulling upon it might result in malignant disease where there was a predisposition to it. Sunstroke occasionally impaired the hearing. Syringing with warm water was the best treatment for impacted cerumen.

The next paper was by **Dr. Stephen Smith**, and was on

EMANATIONS OF SEWER GASES.

The very important subject of ventilating sewers, he said, had been altogether too much neglected. In New York the Department of Public Works had adopted a system of doing this, which not only filled the dwellings and schools, but saturated the very streets with the noxious vapors so productive of filth diseases, which everybody desired to avoid as much as possible. Connecting with the sewers was a series of perforations, or man-holes, by means of which the sewer gas escaped, and as it was of a slightly greater specific gravity than the atmosphere, it became a constant source of danger to the public. As an illustration, he mentioned the case of Forty-second Street between Fifth and Sixth Avenues, where he resided. On this block, eight hundred feet in length, there were nine man-holes (or one to every hundred feet), one of them being directly opposite a large club house, and another opposite a church. The air was seldom free from the odor of sewer gas, and in damp or foggy weather the residents were frequently obliged to close their windows on account of it. The street was a great thoroughfare, and those passing through it constantly noticed the odor, but generally supposed that it was brought on the wind from some distant quarter.

What was required for ventilating the sewers was an apparatus which was aspirating. The impure gases should be driven out and diffused through the atmosphere at such a height that they could do no injury, while their place was supplied by fresh air. What Dr. Smith recommended was the use of metallic tubes connecting with the sewers and carried to a sufficient height above the house-tops to secure the above end. Were these adopted, there would always be a downward current of air into the vaults, and if the ventilating shafts were placed only at intervals of one hundred feet, he had no doubt the sewers would be thoroughly ventilated. This was a matter which ought to be regulated by the Board of Health; but when any complaint was made to them of the existing nuisance it was referred to the Department of Public Works as the proper authorities to attend to it.

The fourth paper of the report of the Committee on Hygiene was by the Chairman, DR. VAN DER POEL, on the subject of

DANGERS TO PUBLIC HEALTH FROM THE ERECTION OF HIGH APARTMENT HOUSES.

The growth of the city of New York, he said, constantly excited new interest. Not long since, a law regulating the construction of tenement houses had been passed. It wisely restricted the amount of the lot which could be covered by the building, and also required that every room should be open to the external air. Now the numerous apartment houses which were springing up with such rapidity in every section of the city, called for the most serious attention on the part of the Board of Health. It was true that the same restrictions just mentioned in regard to tenement houses were required in their construction, but another evil had arisen in connection with them, which required new regulations, and this was the enormous height to which they were now being carried. The introduction of elevators did away with many of the objections to this on the score of convenience, but the practice of erecting lofty apartment houses was fraught with serious evils, not only to their occupants, but to all the neighboring property. As long ago as 1869, the authorities of Paris had passed an enactment which required that no house should be more than one and a half times as high as the street on which it was built was wide. Furthermore, it required that even on the widest boulevards no house should be more than five stories in height, exclusive of the mansard. The results of this were most admirable, and Parisian apartment houses were everywhere recognized as the best of their class.

Dr. Van Der Poel then gave several instances in which apartment houses in New York were carried to an enormous height. Thus, one on Madison Avenue was one hundred and twenty-two feet high, or twice as high as the street was wide, and it covered ninety-five per cent. of the lot on which it was built. This matter had already engaged the attention of the insurance companies, as well as of the Fire Department, the authorities of which had declared that it was impossible to save from destruction by fire any portion of a building that was over sixty-five feet high. If the erection of these lofty buildings were to be permitted indefinitely, the streets would be converted simply into narrow chasms.

Having alluded to the disfigurement of the city, from an æsthetic point of view, caused by these enormously high buildings standing beside those of ordinary size, and spoken of the beautiful and regular appearance of the streets of Paris in contrast, he went on to mention some of the evils to which the inmates of such houses were subject. Since the use of apartment houses had come into vogue, no general epidemics had prevailed in New York; but in case of an epidemic of contagious disease occurring, isolation would be practically impossible. In the next place, the apartments on the first three floors of such houses were deprived of sunlight, and must necessarily be more or less unhealthy in consequence. Thirdly, the air-shafts employed to give ventilation were a constant source of danger. As long as the plumbing was new, there might be no trouble; but, later on, it could not be but that miasma would be wafted to all the families on the upper floors. Hence, while the upper apartments were more desirable on the score of getting more air and sunshine, they were the most objectionable on account of this danger. As one line of pipes was usually employed, it was terrible to think what might be the consequence of cholera or typhoid fever breaking out in such an apartment house.

In the next place, he considered the injurious effects of these high buildings upon surrounding property. In the opposite and adjoining streets no sunshine could penetrate, and however clean they might be kept, they would be damp and unhealthy, as the sun's rays were the most important agent in causing rapid oxidation. It was on this account that in Italian cities, when there was far more sunshine than here, the upper stories were, as a rule, preferred. Again, on account of the great height to which these buildings were run up, currents of air were liable to be caused which might cause the chimneys of adjoining houses to smoke, or which might interfere with the ventilation of their sewer pipes. In conclusion, he advocated the passage of a law regulating the height of houses in accordance with the width of the streets on which they are built, as was the case in Paris.

Miscellaneous business being now in order, the Secretary read the

RESIGNATIONS

of Drs. Austin Flint, Jr., William Thurman, James H. Low, M. B. DuBois and J. E. Lay; all of which were, on motion, accepted.

ADDRESS OF THE RETIRING PRESIDENT.

DR. DAVID WEBSTER then delivered his address.

He said that during the year past, the Society had been in a flourishing condition; more scientific papers had been presented than could be read, and the attendance had been much larger than ever before. At the annual meeting last month, there had been an attendance of eight hundred physicians, and, although about two hundred of them were non-members, he believed that it was the largest meeting ever held by any local society on this continent. One hundred and fifty new members had been added to the roll; but there was still room for missionary work, as the membership was not yet quite a thousand, and there were about sixteen hundred unsectarian practitioners in New York. In concluding, he spoke of the distinguished members who had died during the year, among whom were Drs. George M. Beard, John P. P. White, F. D. Lente, Charles Wright, and J. Marion Sims. On motion, the adjourned annual meeting was adjourned; after which there was a

Stated Meeting.

THE PRESIDENT, S. OAKLEY VAN DER POEL, M.D., IN THE CHAIR.

The minutes of the above meeting having been read and approved, Dr. Van Der Poel, the new president, delivered his

INAUGURAL ADDRESS.

In the course of it, he said that the Society, which was not only the largest in the country, but contained some of the best known names in medical literature, was already in good working order. It had reached a point where better than merely ephemeral work should be done, and, he thought that the large number of hospitals in the city afforded a vast amount of rich material for study which had been hitherto practically denied to the mass of the profession, but which might be utilized to advantage through the agency of the Society. By this means the members might be enabled to study practically the relative value of different methods of treatment, the influence of diathesis, the affiliation of various complaints, and other similar topics. The collective investigation of diseases had for some time past been pursued with excellent results in Great Britain, and the British Medical Association had given aid and encouragement to the movement. He had often wondered why the matter had never been undertaken systematically here. It was true that some spasmodic attempts had been made in this direction; but the endeavor had been made to cover too wide a field. Such inquiry ought to be limited in its nature, and addressed to a comparatively few individuals. In England an example of the excellent work that had been accomplished, was furnished by arsenic, our knowledge of the effects of which had been materially increased by this means. He could not too highly recommend the advantage of self-study of disease, and would suggest as a topic which might perhaps be fruitful of good results, the investigation of dyspepsia, an affection which caused an unutterable amount of misery, but killed no one.

He then spoke of the death of Dr. Sims, whose name, he said, was almost a household word on both continents, and appointed Dr. W. Gill Wylie to read a memoir of him at the January meeting.

The paper of the evening, on

CEREBRAL EXHAUSTION,

was read by DR. J. LEONARD CORNING. The affection referred to, he said, was a functional one, but he believed that it was characterized by certain changes in the protoplasm of the brain-cells which, in the present state of our knowledge, we were unable to appreciate. The symptoms, taken in their chronological order, usually occurred somewhat as follows: Restlessness during the day, and sleeplessness at night; pains in the vertex or superciliary region, and sometimes confined to the occiput; disorders of memory; loss of will power; morbid irritability, often characterized by outbursts of unrestrainable anger; disorders of the vaso-motor system (cerebral hyperæmia often alternating with cerebral anæmia); disturbances of the heart's action; unevenness of the pupils; morbid dread of society; morbid fear of various kinds; and, finally, in some instances, hallucinations.

Having alluded to the predisposing and exciting causes, he went on to speak of the treatment. The principal point was to secure rest, by which the further drain upon the nervous system was prevented, and the energies recuperated. A gradually increasing amount of sleep was to be induced by keeping the patient in a darkened room for from ten to fifteen hours during the twenty-four. Whenever the patient awakes, nourishing food is to be administered in fluid form. Alcohol is generally required, and such tonics as cocoa, iron, and phosphorus are recommended, while systematic feeding is of the utmost importance. In the waking hours of the patient, reaction is to be indulged in, and all mental labor is strictly forbidden. The bromides are often of great service temporarily, and are to be given in full doses during the day, so as to insure sleep at night.

DR. PUTZEL said that he could not agree in some points with the writer. As to the circulatory disturbances in cerebral exhaustion, these were often advanced, but no proof of them was given. In the dead-house, these disturbances were not seen unless local disease was present. As to whether hyperæmia or anæmia was present in any given case, the best authorities often differ. The causes of cerebral exhaustion he believed to be heredity, worry, and general anæmia. When there was a hereditary tendency, it was usually found that no treatment was of much value. His general plan of treatment was a tonic and stimulant one, and the tonic he preferred was arsenic. The bromides, he thought, were very injurious in their effects. Often at first, their administration seemed to be followed by benefit, but subsequently they did much harm.

The paper was further discussed by Drs. David Webster, D. B. St. John Roosa, A. Jacobi, and E. Harwood, and Dr. Corning made a few concluding remarks.

The Society then adjourned.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, November 13, 1883.

THE PRESIDENT, THOMAS M. MARKOE, M.D., IN THE CHAIR.

DOUBLE DISLOCATION OF THE PATELLA.

DR. F. LANGE presented a boy eleven years of age, who illustrated dislocation of both patellæ outwards in every attempt to flex the knee-joint. It was difficult to determine whether or not the abnormity was congenital, because it was not noticed until quite late. It had been simply observed that the child was not able to walk as well as other children, that his knees were exceptionally thickened, and became tired easily. Dr. Lange saw the boy about the first of June last, when he was pale, nervous, and sometimes fainted. When he walks he lifts his pelvis, and tries to keep the thighs as perpendicular as possible, thereby avoiding flexion at the knee-joints. The extensor muscles of the thigh are somewhat atrophied. Every time the joints are flexed the patella, which is abnormally small and flat, becomes completely dislocated, and turned so that its internal edge is directed in front, and the condyles of the femur can be easily marked out. There is a strong inward rotation of the femur during flexion. On the other hand he can extend the limbs completely only with difficulty; that is, they are stretched to about a right angle without hindrance, and then he makes a peculiar rotatory movement with the heel on the table and pushes the entire limb in order to complete the extension. If the patella is kept in position, he is unable to flex either joint. The hip-joints were normal. He had been wearing an apparatus, but without improvement. A complete cure probably cannot be obtained.

LIGATION OF THE COMMON ILIAC ARTERY FOR ANEURISM OF THE EXTERNAL ILIAC; OPERATION PERFORMED THROUGH THE PERITONEUM.

DR. LANGE also presented a patient with the following history:

The patient is thirty-seven years old; a musician;

admits having had gonorrhœa, but denies syphilis. He suffered from "ulcers in the throat" about six years ago, and presents still a hyperostosis of the right tibia of probably syphilitic nature.

In July, 1882, he first noticed pain in his left leg about the knee, which appeared quite suddenly and caused transitory intense lameness of the limb. In this way he suffered till January, 1883, being partly in hospitals, partly at home, but never entirely free from a discomfortable feeling or soreness in knee-joint. The joint is said to have been swollen, and was treated for some time by immobilizing dressing. A puncture was also at one time intended, but omitted on account of spontaneous improvement. The patient says that all through that time he had already a small lump, about the size of a pigeon's egg, in the left inguinal region. From January till May, 1883, the patient felt well, but in May he suddenly fell, on account of absolute lameness of the left leg, so that he had to be carried home, where he improved very soon. Such fits, without any pain, were repeated about three times within the next month.

In July, Dr. Lange saw the patient first. Several weeks previous to that he had been subject to severe suffering. The lump in his left groin, which so far had attained about the size of a hen's egg, had increased rapidly without apparent cause. Numbness and feeling of cold had befallen the limb, which became more and more weak, and a more or less severe pain along the anterior aspect of the thigh persisted.

On the 23d of July a pulsating tumor with all the characteristics of an aneurism occupied almost the whole iliac fossa, protruding the abdominal walls above Poupart's ligament. Its upper boundary ran from the anterior superior spinous process towards the umbilicus, ending about an inch below the same in the middle line. The latter formed about its medial outline. A spindle-shaped process of the tumor existed in the direction of the femoral artery below Poupart's ligament. But nowhere could arterial pulsation be detected on the limb, which was cool and had a bluish hue.

Ligation of the common iliac artery was performed as the only remedy worthy of consideration in view of the rapid growth of the tumor within the last few weeks, and I resolved to perform the operation through the peritoneum, on account of the difficulty which must have offered itself in this case to the retroperitoneal and customary way of procedure.

The patient was prepared by rest, diet, laxatives, and internal administration of bismuth, and the operation was performed under strict antiseptic precautions, without any serious difficulty, with the able assistance of Dr. McBurney and the House Surgeon at Bellevue Hospital on the 26th of July.

Dr. Lange decided to make a long incision, and it commenced, as could be seen from the scar, an inch and a half above the umbilicus, and reached downward about six inches. All the intestines were removed from the upper aperture of the pelvis and wrapped between large flat sponges outside of the abdominal cavity. An extra large speculum served as a good retractor and reflector, so that the second act of the operation, the ligation of the artery, was executed with safety and ease. The ligature consisted of silk, and was cut short. It could be ascertained that the artery was lifted from its normal bed by the blood-sac, over the medial aspect of which it could be traced for some distance.

No bad symptoms followed the operation, and the vitality of the limb remained unimpaired, excepting a small cutaneous necrosis on the large toe. The temperature was never very high, and as far as he remembered, only once above 102 F, at the time when the first movements from the bowels took place, and partly perhaps due to a cystitis in consequence of catheterization. The patient was discharged about five weeks after his admission. At that time a slight diminution of the tumor had already taken place, and a faint pulsation in the main arteries could be detected. Dr. Lange did not know whether that was not an error, because he was at a loss to discover any pulsation at this time. The temperature of the limb has become more nearly normal, yet it was somewhat less nourished, and is paler in color than the right one; sensation is normal, but reflex irritability is diminished *vis à vis* to the right side. The pain the patient complained of formerly has ceased, and the tumor has shrunk to the size of a good-sized orange.

COMPOUND COMMINUTED FRACTURE OF THE SKULL; ABSENCE OF BRAIN SYMPTOMS; HEALING BY FIRST INTENTION; RECOVERY.

Dr. Charles McBurney presented a child, five years of age, who received a compound comminuted fracture of the skull on the last day of October. He was operated upon a few hours after the receipt of the injury, under Dr. McBurney's direction, by Dr. Fuller, House Surgeon at Bellevue Hospital. There was marked depression of bone, but there were no brain symptoms. There was a ragged wound, about an inch in length, at the seat of the injury; and the operation was begun by extending this wound about an inch in each direction, when an area of bone about one inch in diameter was removed, made up of many small fragments. The dura mater was not injured. Before and during the operation, the parts were irrigated by bichloride solution, the edges of the wound were trimmed, and the aponeurotic layer, together with the periosteum, was brought together by one deep row of sutures, and the skin layer by another. No drainage-tubes were used. The wound was dressed with iodoform, prepared cotton and gauze, and a starch bandage was applied.

The dressing was not removed until the eighth day after the operation, when the wound was found in the condition of complete union, as then seen. Not a single unfavorable symptom developed during the progress of the case, and no dressing was required after the first was removed.

OSTEO-SARCOMA OF THE LOWER JAW.

Dr. McBurney also presented a colored boy, thirteen years of age, who had a tumor on the side of his face and neck, which was especially notable on account of its size. The tumor was said to have had a growth of nine years, and to have commenced in the lower jaw, from which time—according to the account—it had quite steadily increased in size up to the present date. According to the history, which was exceedingly meagre, the entire tumor was removed about three years ago; but Dr. McBurney had been unable to obtain any of the details of the operation. The growth seemed to involve the lower jaw, and possibly the upper jaw, and considerably narrowed the fauces and cavity of the mouth. Its circumference was twenty-five inches, and it measured eighteen inches from side to side. There had been an average growth of two inches during the last six months.

ARTERIO-VENOUS ANEURISM OF THE COMMON CAROTID ARTERY AND THE INTERNAL JUGULAR VEIN.

Dr. L. A. Stimson presented a patient, twenty-five years of age, who had traumatic communication between the common carotid artery and the internal jugular vein, produced by a stab with a penknife in February, 1882. A profuse hemorrhage occurred at the time of the injury, but it was arrested within two hours, and did not return. At the end of a week, the wound was healed. The neck, however, remained swollen, and in the following June, after a spree, a lump appeared in the throat. The face and neck became swollen; there was some difficulty of breathing; and the patient consulted a physician, who called his attention to a peculiar thrill in the neck. The acute symptoms soon subsided, and in the following August the man resumed work, but soon found that it interfered with his comfort, produced a choking sensation, vertigo, etc., and he abandoned it. Since that time he had consulted several physicians, and had been uniformly advised to have nothing done. He came to Bellevue Hospital complaining of gastric distress, choking sensation, vertigo, dimness of vision in the left eye, and loss of hearing in the left ear. There was considerable exaggeration in his account of all these symptoms. At that time, however, there was a marked thrill over the left side of the neck down to the clavicle, with a loud double sound. Dr. Stimson finally decided to operate, with the intention at first to place two ligatures upon the vessel, but finally decided to apply only one, and that upon the proximal side of the common carotid artery, trusting that the recurrent stream from the distal side of the opening would not be sufficiently strong to give rise to any discomfort. The operation was performed on the eighth day of October. An incision was made so as to expose the artery above the omohyoid muscle; but the tissues overlying the vessel were found so thickened at this point that the incision was prolonged downward, and the artery tied below the muscle; a drainage-tube was introduced, and a dressing applied. The dressing was changed on the fourth day; the drainage-tube was removed; and from that time recovery was rapid. There was no rise of temperature above 100° F., except once, and then only for a few hours, when it sank and remained normal. The thrill, which ceased at the time the ligature was applied, was perceptible at the first dressing, but it was very slight; and it can now be felt, but in very much diminished force as compared with that which was present before the operation was performed.

During the progress of the case, after the operation, two accidents occurred. The first was on the tenth day. The man awoke from sleep with præcordial anxiety and distress, and also distress in breathing, and was very much alarmed. He was quieted with a moderate dose of morphine, went to sleep, and suffered no further inconvenience. Dr. Stimson thought that the symptoms were due to disturbance in the pulmonary circulation, due to transmission of a small embolus detached from the clot. Exactly where it came from, however, he was unable to say. Since that time the patient had had no return of a similar attack, but has had at intervals a peculiar distress which would seem to indicate that probably the explanation given for the first attack was incorrect.

The second accident occurred about the fourteenth day, when he complained in the morning of some loss of power in the right hand, with a moderate amount of dizziness which disappeared in the course of two or three hours. He has not suffered from any inconvenience of a similar character since. Dr. Stimson thought that undoubtedly these symptoms were due to cerebral embolism.

PRIMARY EXCISION OF THE ELBOW-JOINT FOR INJURY OF THE ELBOW.

DR. W. T. BULL presented a patient, forty-eight years of age, who fell three flights from a scaffolding, and received a compound fracture of the ulna, the olecranon being splintered into several pieces, and a vertical fracture or fusion between the condyles of the humerus. He had also a fracture of the ilium on one side. The operation upon the elbow-joint was performed twenty-four hours after the receipt of the injury. All the articular ends were excised, the entire olecranon, the head of the radius, the condyles of the humerus, making in all about two inches of bone, the periosteum being saved as far as possible. The limb was dressed in the right-angled position, and healed, after an attack of cellulitis, in five weeks. Peat and carbolic acid dressings. Eight months after the operation, the patient has now very little power of flexion, but he is able to lift considerable weight with the limb, and the motion of the fingers is satisfactory. He is able to put his hand to his head. While the result was not all that might be desired, Dr. Bull thought that it justified the operation, and that the limb even with its crippled condition was a great improvement on an artificial one.

DR. WEIR suggested that considerable benefit might attend the use of some lateral support for the limb.

AMPUTATION OF THE ENTIRE PENIS FOR EPITHELIOMA.

DR. BULL also presented a patient, æt. 43, who came into the New York Hospital with epitheliomatous ulceration of the penis, for which the entire organ was removed down to the insertion of the corpora cavernosa into the pubic bone, the corpus spongiosum being divided just in front of the bulb. The specimen was presented. It was a rather curious fact that the patient traced his disease to the cicatrix of a chancroid, which had been in existence twenty years before. The growth itself appeared first as a wart, and gradually extended, and he had withstood the ulceration with the suppuration, and the effect produced upon his general system with a great deal of pain for ten years before submitting to the operation. At the time the operation was performed, the ulceration had extended as far back as to within one inch and a half of the root of the penis, but the extremity of the glans was intact. There were induration and enlargement of the inguinal glands upon both sides to the size of a horse-chestnut. In amputating the organ, Dr. Bull followed Demarquay's method. The penis was encircled by two incisions, which started from just above its roots and joined on its lower surface to split the scrotum, and extended as far as the middle of the perineum. The corpus spongiosum was divided in front of the bulb and detached from the corpora cavernosa, and the scrotum on either side dissected back. The attachment of the crura to the pubic arch was divided with scissors. The bleeding was not excessive, and was easily controlled with artery clamps.

The urethra was slit up along its roof and floor, and stitched into the edges of the wound at the peno-scrotal junction. A drainage-tube was inserted at the lower angle of the wound and the edges sutured with catgut. Peat and "bichloride" dressing. Primary union failed, and the wound healed by granulation in six weeks, a catheter was left in the urethra forty-eight hours, at the end of that time a chill occurred and it was withdrawn. A bougie or sound was passed every day for a month, but none has been used for two weeks past. When discharged, a No. 30 sound could be introduced without difficulty, and the same number can be used now.

With regard to the enlarged glands in the groin, Dr. Bull had intended to remove them, but as the operation had already been prolonged and tedious, he decided to postpone their removal until a future date. Since then the induration has *almost* entirely subsided, the improvement in the patient's general condition has been perfectly satisfactory, and began immediately after the operation was performed. He is obliged to urinate in the sitting position. Dr. Bull thought that the wound would have healed more readily had the testicles been removed at the same time amputation of the penis was performed, but the patient declined to part with all his evidence of manhood.

EXCISION OF THE WRIST-JOINT.

Dr. H. B. Sands presented a patient upon whom he had recently performed excision of the wrist-joint. He was a Swiss, forty-three years of age, and a waiter by occupation, who came under Dr. Sands's notice in the early part of last summer, having suffered for nearly a year with symptoms of strumous arthritis of the wrist, the disease having gone on to softening and destruction of the joint, without the formation of abscess. He was treated by immobilizing the joint, but without benefit. The wrist being considerably swollen, very painful, and tender, Dr. Sands decided to perform the operation of excision, which he did on the 31st of July, according to Langenbeck's method, by making a single incision upon the dorsum of the hand and wrist. It was found that the disease involved a great extent of the synovial membrane, which had to be almost entirely cut away. The ulna and radius were separated, so that they could be moved upon each other with crepitus, and before the operation; the bones were softened. The first row was removed by ordinary dissection, the other bones being removed with a sharp spoon; the trapezium, however, and also the pisiform bones being left. The extremities of the ulna and radius were removed, and the bases of all the metacarpal bones, except that of the thumb. A bone drain was inserted, peat dressing applied, and the arm suspended. When the first dressing was removed at the end of twenty-three days, the deep wound was found entirely closed, and there remained only a superficial ulcer which closed at the end of a few weeks. During the operation, the radial artery was divided, but no harm came from the accident. The hand is now beginning to become useful, and the patient has the power of extension and flexion of the fingers to a considerable extent. He can flex the first phalanges at nearly a right angle with the metacarpal bones. Apposition of the index finger with the thumb is easy, the extension of the latter being limited, in consequence of adhesion of the long extensor tendon to its sheath. The patient is free from pain, and is able to move his hand, and to grasp objects with considerable firmness. Passive motion was resorted to after removal of the dressing, and has been kept up steadily since. The operation was tedious, but Dr. Sands believed that Langenbeck's method of excision would be found preferable to that recommended by Lister, in which lateral incisions are practised.

Dr. Stimson remarked that he performed excision of the wrist last summer by the same incision, and found, as Dr. Sands had mentioned, that the removal of the bones was very easily effected.

Dr. Sands said he omitted to state that the power of the hand is very much increased when circular compression is made around the wrist.

ANEURISM BY ANASTOMOSIS OF FACE AND ORBIT—RIGHT SIDE; ELECTROLYSIS PERFORMED ON FACE; LIGATURE OF RIGHT COMMON CAROTID ARTERY.

The President presented a patient whom he first saw with Dr. Damainville, and who had kindly furnished the following history of the case:

Emily C., æt. 43, widow, born in France, had children, all healthy; was born with nævus on right cheek near the eye, which, although quite large, did not seem to grow or pulsate until after her first confinement, sixteen years ago: then it began to grow steadily, extending towards the lip, but giving her no pain. Seven years ago, a Dr. Goodridge or Goodrich—the patient remembers neither the name nor the address of the doctor—probably tied the right superior coronary artery, so far as can be made out from her vague description. Shortly after the operation, whatever it was, the aneurism began to extend upward towards the eye. She did nothing for it, as it gave her no pain, until some time in January, 1883, when, having accidentally struck her head against the bedpost, the tumor began to pain her, and to increase in size.

On February 7, 1883, she came to the French Hospital for treatment. At the time of her admission, her condition was as follows: Tumor well marked, extending from orbit and lid to the lip, elevating the skin to the extent of two inches or more; pulsation very strong, and easily seen from a considerable distance. All bloodvessels on that side of the face enlarged; mucous membrane of mouth and gums so vascular that they bled on the slightest provocation; complains of sense of fulness and throbbing in eye and lip, and says that her vision has never been as good with that eye as with the other. On introducing the finger into the mouth, the pulsations are felt to be very strong and violent.

February 17, 1883, Dr. Charles Bliss performed electrolysis by means of a zinc carbon battery. Eight cells were used, several needles being thrust in various places. Application lasted twenty or twenty-five minutes. This operation was followed by quite an extensive slough at the upper part of the cheek, the wound healing by granulations and leaving a crucial cicatrix. No hemorrhage took place during or after this operation. The pulsations were entirely suppressed when the sloughing occurred, and for some little distance around it, but nowhere else. The other parts of the tumor began to increase very much in size; the lower lid and the upper lip being very much swollen and throbbing violently, thus showing that electrolysis was followed by beneficial results only where it produced sloughing, as stated above.

April 21.—By the advice of Drs. F. H. Hamilton and T. M. Markoe, the right common carotid artery was tied above the omohyoid, the gut ligature being employed. Ether was administered. Simply dry cotton was used as a dressing. Union by first intention occurred, the ligature being absorbed. No bad symptoms followed the operation excepting pain in the right arm and around the clavicle, which prevented her from raising the hand to the head for the purpose of combing her hair, which, after the operation, began to fall off profusely. Immediately after the operation all throbbing ceased in the tumor, except at the inner canthus near the medial line, where a slight pulsation could be detected with the finger; but the improvement was steady and progressive as could be judged from the diminished size of the face, the comparatively free motion of the lower lid, and the feelings of the patient in general.

June 8.—She was discharged from the hospital. Although the pain in right arm had very much diminished, she still had some—enough to impede the motions of the limb. Pulsations in lid and lip suppressed, but quite perceptible at the inner canthus.

September 4.—Called to see me to-day. No pulsations perceptible except at inner canthus. Angular artery seems to be enlarged. Pain in right arm entirely gone. Thinks her vision on that side is very much improved; her hair has ceased falling off. Says that for the first time in a number of years she can chew on that side of her mouth, and can brush her teeth without making the gums bleed. The cicatrix on the neck is very firm, slightly painful on pressure or when the weather is about to change. Cicatrix on the face where electrolysis was performed is hardly perceptible; says she feels strong, and has not been as well in years. In fact, the benefit resulting from the operation is greater than usual, and her present condition is as satisfactory as could be desired.

Dr. Wm. S. Halstead then read a paper on

REFUSION IN CARBONIC OXIDE POISONING.

(See page 622.)

Dr. R. F. Weir remarked that last spring his attention was called to the frequency with which coal-gas poisoning occurred in the past few years, and also to the fact that the greater number were due to gas made by the water process, in which carbonic oxide exists in the proportion of about twenty-five to thirty per cent.; whereas in ordinary coal gas, made after the old method, it exists in the proportion of only two to six per cent. The danger, therefore, from leakage, unburnt gas, etc., in the use of water gas, is apparently very great, and should be known more generally than it now is. Coal or naphtha gas is much safer.

THE PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, November 21, 1883.

The President, William M. Welch, M.D., in the Chair.

Dr. J. C. Wilson presented a

NOTE ON PARALDEHYDE AS A HYPNOTIC.

He stated that he had found the medicinal dose to be from thirty minims to two fluidrachms, and a drachm to be the average dose for an adult under ordinary circumstances. It is to most patients disagreeable, and must be administered with a considerable draught of water. The taste and odor are ethereal and penetrating. Patients complain of this taste several hours after taking it, and it may be recognized by its odor in the breath. It is probably eliminated unchanged by way of the lungs. Paraldehyde acts upon the cerebral hemispheres, inducing rather speedy drowsiness without preliminary excitement. "A lethal dose suspends the functions of the medulla and the respiratory centre, and the action of the heart ceases after the respiration." One observer (Brown) noted a slight depressant effect upon the heart in a single instance. It is stated that neither nausea, depression, headache, constipation, nor any unpleasant after-effects have followed its administration. Several of his own cases complained of the disagreeable after-taste already alluded to, and one or two of nausea.

Paraldehyde has been prescribed as a hypnotic, by the Italian physicians who have used it, in the various conditions calling for such a remedy, but they have found it especially serviceable in the sleeplessness of dementia paralytica, hysteria, and in other forms of disorder of the nervous system.

Dr. Wilson has prescribed it in nine cases, with a view to its influence as a pure hypnotic. In one hysterical patient it acted well for a short time, but lost its effect, and was discontinued. In a patient who could not sleep, after having acquired the habit of watching an invalid at night, it procured prompt and refreshing sleep. In a lady rendered sleepless by a sudden and appalling bereavement, it caused sleep, but was abandoned on account of the nausea which followed its administration. A gentleman who had sleeplessness and great mental depression, after a debauch, and who failed to sleep for several nights after reasonable doses of the bromides and chloral, took a drachm of paraldehyde, and slept seven hours, waking refreshed and hungry. On the next day, this patient, being disturbed after he had taken it, failed to sleep, but succeeded in sleeping on taking a second dose. The other cases were sleeplessness from ordinary causes, and were all more or less fully relieved. It appears speedily to require an increase of the dose. He expressed the view that paraldehyde will prove a useful addition to our sleep-inducing drugs, but will supersede neither chloral, which it resembles in its effects, nor any others among them.

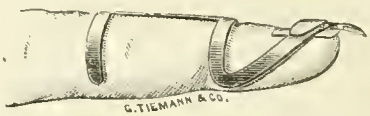
NEW INVENTIONS.

THE "AMNIONTOME."

By GEORGE F. E. WENCK, M.D.,

OF NINETY-SIX, S. C.

Rupturing the membrane during childbirth I believe is considered the most simple operation in medical practice. Still I have found that the finger-nails, as invariably suggested in text-books, are very often of no avail. I have, to accomplish the rupture of the membrane, introduced knives and scissors, which at the best constitutes an awkward procedure. This led me to construct a very simple instrument, which I call the Amniontome, and which was made by Messrs. George Tiemann & Co., New York City. I presented it to the South Carolina State Medical Association in April last. From very satisfactory personal experience with the instrument, I venture to recommend it to the profession. The amniontome, as seen in the accompanying figure, consists of a steel spring frame to which a small blade is attached. It is adjustable to the index finger of the right hand, but will fit any finger, both right and left. Placed in position it will not interfere with the main-joint of the finger, which can be moved at will while it is firmly attached. It has proved in my hands a simple and efficient means to rupture the membrane at any point presenting, during any of the stages of labor, needing very little skill or practice, and I only wish that the instrument may be of some service to the profession.



NEWS ITEMS.

BALTIMORE.

(*From our Special Correspondent.*)

Sanitary Convention in Baltimore.—The Sanitary Convention called by the State Board of Health of Maryland, met in the hall of the Young Men's Christian Association in Baltimore, November 27th and 28th, and listened to a number of interesting papers. The attendance was small, rather discouragingly so, but those who were present were repaid for their trouble.

Dr. Richard McSherry presided, and in calling the convention to order remarked that the political influence of a nation is as much dependent upon its muscular activity as upon its army and navy. Health is wealth. Our design is to combat physical evils by showing the people the best means of obtaining good food and pure air and water. Unthinking persons underrate medicine when they think it is simply the administration of drugs, for, in its higher sense, materia medica covers all that is of value to the physical interests of man. We accept the inevitable, but we must and will contest the ground step by step and inch by inch against all that form of evil which comes under the head of preventable disease. Prevention is better than cure, as primitive innocence is better than sinning and repenting.

Mayor Latrobe, in an *Address of Welcome*, said:

"I am sure the result of your deliberations will be beneficial. No subject is more usefully interesting than that of personal and public hygiene. Upon it depends, in a great degree, the prosperity and happiness of a community. The success resulting from a proper attention to public hygiene is shown by the reduction in the death-rate of so great a metropolis as London, now regarded as one of the healthiest cities in the world. Here in Baltimore, with our surface drainage, abominable system of cesspools, and other nuisances, our health reports show a very small death-rate. I attribute this in a measure to our abundant supply of good water, the rolling character of the ground upon which the city is built, aiding, as it does, the surface drainage, and enabling every heavy rain thoroughly to wash out the streets, the absence of tenement-houses, the naturally healthy location of the most populous sections of the city, and last, but not least, the vigilance of our health department. With a proper system of sewerage for sewage matter (it is a question with me whether surface drainage for storm water is not really more conducive to public health), a more liberal use of our ample water supply, the introduction of public baths, and the entire abolition of the sixty odd thousand sinks now honeycombing the surface ground of our city, I have no doubt our health department would guarantee to make Baltimore the healthiest city in the world.

"I refer to these matters incidentally in my remarks, as I see by the programme that many of them will be matters for discussion in your deliberations. It was with much pleasure that I listened a few days since, at the Johns Hopkins University, to a lecture on the subject of sewerage as applicable to large cities. I believe the time has come when Baltimore must realize that a proper system of sewerage is necessary for the preservation of its public health, and I am sure that a people which has had the courage to invest over nine millions for the introduction of water, will not be alarmed at the contemplation of the cost of a proper system of sewerage, required to protect health, and which, if judiciously controlled, will be as self-sustaining as are our great water works."

The **Hon. H. A. Hallowell**, of Montgomery County, read a paper in which he said: Rural districts are far from being the abodes of health that enthusiasts suppose. Bards have sung the praises of pure water, fresh air and living near nature, yet prosy truth discloses the fact that the rate of mortality of cities is not greater than that of the country. Vitiated air, wretched diet, impure water, never-ceasing toil, exposure, and hardship, claim victims more frequently in the country than statistics show. Country villages are really in need of sanitary information and regulations. In his own county, a certain pond of stagnant water which had been dammed up by the County Commissioners, caused last year several deaths and forty cases of malarial fever. In another part of the county, a neglected fish-pond was the source of an epidemic of fever causing a number of deaths, four of which were in one house.

Dr. W. S. Forwood read a paper on the so-called *Canning-house Fever*, a disease caused by the accumulation of refuse matter from the establishments, for canning vegetables, fruits, etc. There is some difference of opinion among physicians as to the extent to which these canneries are factors of disease, but all agree in declaring them an unmitigated nuisance. So far as stench was concerned, he recommended legislation compelling the proprietors of the canneries to remove all refuse in water-tight tanks within a certain time. He stated that it would make a good fertilizer.

Dr. J. F. McShane, Assistant Commissioner of Health of Baltimore, read a paper on *Vital Statistics*, urging legislation to provide a thorough system of reporting and collecting such data.

Dr. John Morris said that the Secretary of the State Board had been provided with a thousand dollars a year to register births, deaths, and marriages, but that not a single entry had been made. He himself had drawn up a bill to abolish this useless office, but the bill had been stolen.

At the sessions on November 28th, papers on *Sewerage* were read by **Col. George E. Waring** and **Mr. C. H. Latrobe**, C.E. Col. Waring's paper was a criticism upon Dr. Chancellor's recommendation of the Liernur system, pointing out that this system does only a part of what is desired, and that at a very high cost.

Mr. Latrobe said that in regard to the choice of a system of sewerage, we may safely conclude that there are but two fundamental questions, viz., which is the most efficient and economical as applied to each case which arises. In making this choice, the sanitary engineer and the sanitary physician, if I may be allowed the expression, should work in harmony. Each can contribute knowledge gained in his particular branch; the engineer, with his knowledge of physical forces, meteorological phenomena, adaptability of materials. and economy of workmanship, must be aided by the physician's knowledge of the seeds of disease, the dissemination, and insidious modes of attack. Together, they may hope to checkmate the enemy; singly, either may make grave errors. The systems now before the public for the collection and disposal of the sewage of cities and towns are: the system of dry removal, as it is called; the water-carriage system, and the pneumatic system. As to dry removal, this system proposes to deal simply with human excreta, totally disregarding all other household waste, as well as that from manufactories. Such a system must, of necessity, be a failure for large cities, from its want of scope.

After having equipped every house with dry-earth closets, you must, of necessity, provide in addition a complete system of sewers to carry off the waste water of the household and of the factory. Water-carriage is divided into two systems, the combined and the separate. The combined is that system in which a single set of drains or sewers is used to carry off household waste of every description (except ashes and solid garbage), which is pretty accurately gauged by the water supply to each house, the liquid refuse of factories and the storm water which falls upon the roofs, yards, and streets. This system is suited in those places where the conditions require that the storm water should be at once taken underground and carried to a distant outlet, whilst economy and structural difficulties forbid the building of two distinct and equally extensive systems—one for sewerage proper and one for storm waters. The separate system is alike with the combined in the fact that water is the vehicle and gravity the motor, but here the similarity ends. The sewage is conveyed in small pipes. The water, which enters the house clean and pure by the water pipes, after passing through bath-tubs, kitchen sinks, and water closets, leaves it as sewage. Cut off, as these sewers are, absolutely from all storm water flow, their dead ends may be taken care of by artificial means. This need is met by providing automatic flushing tanks, which empty at any interval desired into the dead ends, and being filled with clean water only, send a purifying stream into every small artery of the system. For Baltimore the estimated cost of the separate system, exclusive of outfall main, is $4730 per mile; including outfall main, $9790. This outfall main carries out sewage to the Chesapeake Bay, and is a costly but necessary addition to our city.

At the afternoon session DR. JOHN MORRIS read a paper on the *Etiology of Baltimore Catarrh.* He said there are at least twenty-five thousand unfortunates in Baltimore who are affected with catarrh. Many of those so affected are obnoxious to themselves from the ozœna therefrom. He described the disease and its manner of growth. He said that nasal catarrh was aggravated by certain conditions of the weather. The great prevalence of the disease is due to the character of the house air breathed during the winter and spring months. At the present time more than one-half of the houses of Baltimore are heated by the Latrobe stove, or by modifications of the same. This stove, as originally used, was not injurious to health, but changes were made which entirely changed its effectiveness. The air drawn by the stoves in present use is from the cellars, and the known noxious cellar-gases are not favorable to good health. These gases are caused by the subsoil of the city, which is impregnated with gases. These poisonous germs, which are scattered throughout, are due to the abominable system of wells and cesspools which is in use in Baltimore.

Other papers presented were by Dr. W. S. Wyman, of the Marine-Hospital Service, on *Quarantine;* by Dr. E. J. Henkle, on the last *Smallpox Epidemic in Baltimore;* and by Dr. R. Gundey, on the *Conflict of State Powers and Individual Rights in Sanitary Matters.*

All the papers read will be published by the State Board of Health.

THE JOHNS HOPKINS COURSE ON MUNICIPAL HYGIENE.—Dr. John S. Billings, U.S.A., is now delivering a course of twelve lectures at the Johns Hopkins University on "Municipal Hygiene." These lectures are attracting much attention, not only from the medical profession, but also from civil engineers, architects, plumbers, and others interested in sanitation. Whatever the distinguished lecturer undertakes he does well, and the present course cannot fail to increase his already well-earned reputation as a sanitarian. Most of the questions concerning public health now forcing themselves upon municipal authorities find exhaustive treatment.

THE ENORMOUS MORTALITY OF COLORED INFANTS.—One point of highest importance brought out by Dr. Billings is the small expectation of life of the colored population of our cities, as shown by tables compiled, for the first time, we believe, under his direction. From these it appears that of one million colored infants born in Baltimore, one-half will have perished before attaining the age of two years. A similar mortality prevails in other cities where the colored population is large. When it is remembered that of an equal number of white children born in Baltimore, one-half will live thirty-five years, the disproportion becomes startling, and makes imperative a close investigation into the causes, conditions, and remedies for this lamentable state of affairs. Another interesting feature of these tables is the disproportionately greater number of aged colored females than of males. Of the colored males, there will be left at 65 years 57,252; of females, 93,171; of males at 75 years, 19,440; of females, 56,283; of males at 85 years, 2929; of females, 12,726; of males at 95 years, 315; of females, 1477; while 75 males and 158 females will attain 100 years of age. As will be seen, these figures show rather a remarkably short duration of life of colored men than of longevity of colored women, who appear to be much shorter-lived than their white sisters.

DR. J. SHELTON HILL, a young physician of much promise, died last week of consumption, after a prolonged illness. Dr. Hill, originally from Alabama, had spent all his professional life in our midst, and, until overcome by the malady that destroyed him, bade fair to attain an eminent position in the profession.

WASHINGTON.

(From our Special Correspondent.)

MEASLES has appeared in Washington to a considerable extent, and although the public schools still keep open, several private ones have had to close.

ST. LOUIS.

(From our Special Correspondent.)

THE ST. LOUIS MEDICAL SOCIETY ON THE RECOMMENDATION OF PROPRIETARY MEDICINES.—The excitement which has been brewing in the St. Louis Medical Society within the past few weeks resulted in a slight explosion at the last weekly meeting, Saturday night. Stronger timber had been added to the Committee on Ethics, and a strong report, condemning such advertising as the recommendation of proprietary and other medicines, was presented to the Society. Strange as it may seem, the gentlemen who have fanned the breeze, who first inaugurated the movement, now seem anxious to throw ashes upon the flames, which have spread somewhat beyond their anticipations. The report was attacked, and even high influence was lent to the very mild substitute proposed in its place, the report appearing too harsh, and an endeavor was made to substitute another, to the following effect: "That it is the sense of the St. Louis Medical Society that all endorsements of proprietary medicines are in bad taste." Whatever the opinions of the members be, the Code of Ethics, as such, does not, it is believed, directly cover the ground. In the exciting debate which followed, a motion was even proposed condemning, not only the recommending of preparations and nostrums, but especially the advertising which results from the appending of the titles of college professors, which are often attached to such recommendations, the case of the Cocoa Plug-tobacco being especially cited, in which a number of prominent gentlemen of this city and members present at the meeting are implicated.

Notwithstanding the variety of opinions and motives, the very strict report of the Committee was adopted, to wit: That it is a violation of the Code of Ethics to endorse publicly preparations of any kind, at least, as is the usual fashion, to permit the names of the endorser to accompany the advertisement of remedies, whether they be nostrums or not, of known or unknown ingredients.

This is certainly clear and distinct, and it now remains for other leading societies to follow, that the opinion of the profession throughout the land may find a distinct expression, and that an unquestioned position may be taken. Let the justice of this move be disputed, or let it receive the hearty endorsement of medical societies elsewhere.

CHICAGO.

(From our Special Correspondent.)

THE DISPOSAL OF THE CHICAGO SEWAGE.—Dr. Curtiss, of Joliet, read a paper recently before the Chicago Pathological Society on the subject of the disposal of Chicago sewage. He took strong ground, hardly as rational as strong, against the project of sending our sewage down the canal, through Joliet, and into the Illinois River below, diluted with an abundance of the water of Lake Michigan. He claimed that it would never do, that it would damage nearly the whole State, especially that part bordering on these water-courses, and finally that the sewage should be utilized as it is at the little town of Pullman.

Now, if there is any one thing about which all our local sanitarians, as well as those elsewhere in the State, have been of one mind, it is that the canal ought to be deepened and widened so as to allow the city's sewage all to pass off in the way indicated; that, sufficiently diluted with lake water, it will be rapidly oxidized, and will be devoid of any bad odor.

The town of Pullman has been very successful in utilizing its sewage for fertilizing purposes at a profit. The problem of doing this for so large and rapidly growing a city as Chicago, is one of such proportions that nobody has succeeded in securing even the attention of the public here to this method. Nearly all are agreed that every effort should be put forth to prevent the further discharge of the sewage into the lake; for, even if there is no danger of its reaching the Crib, whence comes our drinking water, the people believe there is, and will act and vote accordingly.

Surgeon-General Murray entered upon the duties of his office on November 28th.

A Romance by Dr. Marion Sims. — It is announced that the late Dr. Marion Sims has left a sparkling sketch which will appear in the February *Harper*. It is entitled, "Lydia McKay and Colonel Tarleton," and describes one of the most romantic episodes of the Revolution, the rescue of her imprisoned husband by the fair and clever Lydia.

The New York Society for the Relief of the Widows and Orphans of Medical Men.—The annual meeting of the New York Society for the Relief of Widows and Orphans of Medical Men was held on November 28th. The reports of the several officers showed that the members of the Society now numbered 140, of whom 92 are for life, and 48 are annual subscribers. The Society has extended aid to thirteen widows and four children of deceased members during the year.

The following officers were elected: President, Dr. Isaac E. Taylor; Vice-presidents, Drs. T. F. Cock, S. S. Purple, and J. L. Vandervoort; Treasurer, Dr. John H. Hinton; Managers, Drs. John G. Adams, William N. Bakeman, William Detmold, S. T. Hubbard, John T. Metcalfe, Robert G. Remsen, and J. Wiener.

The Johns Hopkins University Lectures on Municipal Hygiene.—Dr. John S. Billings has now delivered the fifth, sixth, seventh, and eighth lectures of the course on *Municipal Hygiene*, of which the first four were reported last week. They can be briefly summed up under the following:

Disposal of Refuse.—This important problem can be dealt with in two ways, (1) the savage way of each one attending to it for himself as he pleases, throwing it into cesspools or the street; and (2) the coöperative plan, by which the city takes it in charge. The former existed in Paris until 1870, when the siege put an end to it. The latter plan can be carried out either by the city's employés (the better way), or by contract (the cheaper way). Boston has the most satisfactory system in this country. The whole matter has been for many years under almost complete control of an efficient superintendent, whose employés have been well trained. The cost of this system is $76,000, while the revenue is $27,000 yearly.

Great difficulty is experienced in finding suitable dumping places. Sometimes it is used to fill lowlands (but this is objectionable from both a sanitary and an engineering point of view); or it is carried away by barges, or dumped into the sea at some distance (but here there is at times danger of causing nuisances on adjacent shores); a third method, very good from a sanitary point of view, is cremation, which is employed in Leeds and Manchester. The most important refuse is human excreta or sewage, which is typical filth. The cesspool plan for its disposal is *very* dangerous to the health of the population; all sanitarians agree that it should be abolished. It finally reaches the terrible condition found in Memphis, where the contents of the cistern did not differ materially from those of the neighboring cesspool, and where it contributed greatly to the yellow-fever epidemic. The watertight cesspool is but little better and very expensive.

It has been proposed to remove sewage by water-carriage. Here three things must be considered (1) the conveying away of polluted water; (2) the drainage of subsoil; and (3) surface drainage. Sewers were first intended for surface water only; more recently they are employed to remove other matter.

Systems of Sewerage.—About thirty-five years ago it was suggested in England to carry off sewage by separate sewers. This plan has been applied to Memphis, by Col. Waring, and is a success. Arguments in favor of this system over the combined system, are that: since the amount of rainwater is very large, compared to the amount of sewage, the rainwater sewers are much too large for sewage, and unless made egg-shaped in cross section (with small end down), they accumulate deposits; for the depth and velocity are little. (The egg-shaped sewers are used with success in Mainz, Germany.) Moreover, the sewers for sewage in the separate system contain less noxious gas, are better ventilated than those of the combined system, and cost less than one-half and often only one-third of the latter. Baumeister says that where a town extends along a natural water-course, and has wide cross streets running to the water, the surface water may be run off in gutters. The only underground work then is for sewers for sewage only, to which is eventually added a system of subsoil drainage. There should always be a separate system for carrying off subsoil water—a system of pipes with loose joints is used in Memphis. Even where three separate systems are necessary, one for sewage, one for surface water, and one for subsoil water, the cost is but slightly larger than that of the combined system.

The Liernur pneumatic system is condemned by all leading engineers in Germany, England, France, and America. Dr. Billings is opposed to its introduction into any city on both sanitary and economic grounds. Of all systems with which he is acquainted, he considers that of Philadelphia to be the worst.

House Drainage and Plumbing.—The excreta discharged into house-drains are not dangerous if removed before putrefaction sets in. A good system of house drainage requires the separation of the soil-pipe of a house from the sewer by a trap; the securing of ventilation to the house-side of the trap; and the shutting off of the house-drainage from the sewer by a trap. The fresh-air inlet is very important. Every fixture through which foul water is to pass should have a trap as near the fixture as possible. The best traps are the S and half-S traps. It has been shown that very little gas passes through these, and Carmichael has proved that no germs do. The daily use of so-called disinfectants is not advisable; they are for the most part worthless, destroying only the smell, and not the germs and contagia of disease; and secondly, those that are really good are very expensive. There should be no direct connection between the water-supply pipes of the house and water-closet; for otherwise closet-air is liable to get into water pipes.

Streets.—In regard to their paving with cobblestones and Belgian blocks, there is great objection, on account of the gradual pollution of the subsoil, which in warm weather becomes very dangerous; and on account of the noise and rattle, and injuries to horses and carriages. By placing a layer of cement concrete under the stones, the pollution of the subsoil is prevented, and the pavement becomes more elastic, which quality is desirable for horses and carriages. Wood paving is objectionable from a sanitary point of view. The best pavement where there is little traffic is asphalt laid in concrete. The evils of dirty streets fall most heavily on the children of the poor.

Parks provide means of recreation to the citizens, and are the reservoirs of fresh air to ventilate the city. Their beneficial influence can easily be seen. London owes much to its eleven thousand acres of park for its low rate of mortality. Parks are especially beneficial to the poor.

Cemeteries.—Rural cemeteries have everywhere superseded graveyards in the city. Cases of disease resulting from them are almost entirely unknown. While our cemeteries are generally satisfactory, our methods of burial are bad, often dangerous. Bodies should be buried as soon as possible, in light wood caskets, so as to let the germs of putrefaction destroy it, and any specific germs of disease in it, as quickly as possible. *Cremation*, except in epidemics, is not advisable; it tends to promote crime, and is not cheaper than inhumation.

SUCCESSFUL TREATMENT OF CHOLERA.—The State Department is in receipt of a letter from the United States Consulate at Port Louis, Mauritius, enclosing quite a long account of the successful treatment of cholera by T. Edwards Fyers, Esq., who accidentally discovered the remedy in treating a case of supposed poisoning, but which was in reality a case of cholera.

The treatment is numerously endorsed by medical men of high standing, and the account contains a tabular statement giving date of entering into hospital, name, symptoms, treatment, date of discharge, and result in one hundred fifty cases, only *one* of which resulted fatally. Mr. Fyers is not a medical man, "but being impressed with the idea that the symptoms of the disease were produced by poisonous matter in the stomach and bowels, proceeded on the common-sense principle of giving emetics and purgatives to remove it."

"The emetic employed was thirty grains of ipecacuanha and two grains of tartar emetic, followed by very large quantities of hot water to keep up the action of vomiting, and the purgative was castor oil. In every case but one this remedy appears to have given immediate relief, arresting the progress of the disease. In case either vomiting or purging should continue, the usual doses of dilute sulphuric acid will be sure to stop it. It has been found that sulphuric acid has a more successful effect if the stomach has been thus cleared. The patient should not be allowed to eat anything for several days, till the tone of the stomach has been restored. After the vomiting had ceased a single dose of castor oil was given, but no stimulants administered."

It will be remembered that the dilute sulphuric acid treatment of cholera is mentioned in several places in the *Report on the Cholera Epidemic of 1873*, prepared by order of Congress, by Supervising Surgeon-General John M. Woodworth, and Surgeon Eli McClellan of the Army. It was also highly commended by Dr. Nichols, of New York, who used it in the shape of sulphuric acid lemonade, quite successfully.

CHOLERA IN CHINA.—Consular reports from Shanghai, under date of October 16, state that the cholera has about disappeared in that locality, the last death having occurred on the 21st September. At Calcutta the total deaths from cholera for the week ending September 29, is reported to have been ten.

SMALLPOX IN RIO.—Smallpox is still prevailing as an epidemic in Rio de Janeiro; thirty-nine deaths are reported for the week ending October 20, 1883.

YELLOW FEVER AT SANTIAGO DE CUBA.—There were twenty-nine deaths from yellow fever at Santiago de Cuba during the month ending October 31, 1883.

HEALTH IN MICHIGAN.—Reports to the State Board of Health, for the week ending November 24, 1883, indicate that erysipelas has increased, and that inflammation of the brain, diarrhœa, and remittent fever have decreased in area of prevalence.

Including reports by regular observers and others, diphtheria was reported present during the week ending November 24, and since, at sixteen places; scarlet fever at fifteen places; and measles at six places.

OBITUARY RECORD.—The death is announced on the 19th of November, in London, of MR. C. HILTON FAGGE, Physician to Guy's Hospital, in his forty-sixth year.

NOTES AND QUERIES.

PREVENTIVE INOCULATION OF SCARLATINA.

IN our issue of last week, it should have been stated that the observations on the "Preventive Inoculation of Scarlatina with Scarlatinal Virus derived from a Horse" were made by Dr. J. W. Stickler, of Orange, N. J.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM NOVEMBER 26 TO DECEMBER 3, 1883.

WOLVERTON, WILLIAM D., *Major and Surgeon.*—Assigned to duty as Post Surgeon at Washington Barracks, D. C.—*Par. 7, S. O. 222, Department of the East*, November 27, 1883.

BROWN, PAUL R., *Captain and Assistant Surgeon.*—Assigned to duty in the Department of Arizona.—*Par. 4, S. O. 273, A. G. O.*, November 28, 1883.

CARTER, W. F., *Captain and Assistant Surgeon.*—Relieved from duty at Washington Barracks, D. C., to take effect at the expiration of his present leave of absence, and assigned to duty at Little Rock Barracks, Arkansas.—*Par. 4, S. O. 224, Department of the East*, November 30, 1883.

MERRILL, JAMES C., *Captain and Assistant Surgeon.*—Relieved from duty in the Department of the East, and assigned to duty at Columbus Barracks, Ohio.—*Par. 4, S. O. 270, A. G. O.*, November 24, 1883.

SHUFELDT, R. W., *Captain and Assistant Surgeon.*—Now on sick leave, relieved from duty at Jackson Barracks, New Orleans, La.—*Par. 3, S. O. 224, Department of the East*, November 30, 1883.

APPEL, A. H., *First Lieutenant and Assistant Surgeon.*—Relieved from duty at Fort Warren, Massachusetts, and assigned to duty at Madison Barracks, N. Y.—*Par. 4, S. O. 217, Department of the East*, November 21, 1883.

BREWSTER, WILLIAM B., *First Lieutenant and Assistant Surgeon.*—Extension of leave of absence granted September 15, 1883; further extended two months.—*Par. 4, S. O. 271, A. G. O.*, November 26, 1883.

MADDOX, THOMAS J. C., *First Lieutenant and Assistant Surgeon.*—Granted leave of absence for two months.—*S. O. 136, Department of the Missouri*, November 24, 1883.

RICHARD CHARLES, *First Lieutenant and Assistant Surgeon.*—Assigned to duty at Jackson Barracks, New Orleans, La.—*Par. 2, S. O. 224, Department of the East*, November 30, 1883.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

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ORIGINAL LECTURES.

FREQUENT AND PAINFUL URINATION.

A Clinical Lecture, delivered at the Long Island College Hospital.

BY ALEXANDER J. C. SKENE, M.D.,

PROFESSOR OF GYNECOLOGY IN THE LONG ISLAND MEDICAL COLLEGE; SURGEON TO THE HOSPITAL.

(Reported by Edward Develin, M.D.)

GENTLEMEN: To-day I desire to call your attention to that condition of frequent and painful urination arising from certain disturbances and anatomical lesions of the sexual organs.

CASE I.—Our first patient is thirty years of age, and has now been married eight months. Her health has always been fairly good until two months ago, when she began to suffer from frequent and painful urination. These annoying symptoms have continued ever since, and have also increased in severity. She states that in the morning and during the forenoon she is comparatively comfortable, and can retain her urine a reasonable length of time; but towards the afternoon the desire to urinate is frequent and urgent, and she has much pain in evacuating the bladder. These symptoms continue until night, and during the early part of the night she is compelled to rise several times and relieve her bladder; but after she has once fallen asleep she remains quiet until awaking in the morning at her usual time for rising.

Now the fact that she is able, while asleep, to retain her urine until the bladder is distended to an average capacity, is an indication that the trouble does not involve the entire bladder, but that it is limited to the urethra, and, perhaps, the neck of the bladder. If she had a general cystitis, the probabilities are that she would not be able to hold even an average quantity of water in the bladder at any time. We cannot, however, be sure as to the extent to which the bladder is involved without an examination of the urine, but it is fair to suppose, judging from her symptoms, that the trouble is limited to the urethra, and probably the neck of the bladder to a slight extent. It is a curious fact in her history that during the latter part of the night and during the forenoon she is comparatively comfortable, but that her symptoms become aggravated in the afternoon and continue during the early part of the night. This may be due to one of two causes.

First: It may be due to the fact that the irritation subsides after lying in bed for a time, and does not return until she has been about for several hours during the early part of the day. The fact of her being upon her feet and maintaining the erect position, naturally brings more pressure to bear upon the neck of the bladder, and would thus aggravate an already existing irritation, and give rise to frequent urination, which continues until she again seeks relief by assuming the recumbent position in bed for a time. This certainly is one of the causes for this frequent urination in the later part of the day.

Secondly: There is a cause which gives rise to the same peculiarity of clinical history, and that is *malarial poisoning*. A patient suffering from malaria quite frequently has irritability of the bladder, indicated by frequent and painful urination, these symptoms being always most marked in the afternoon and evening. In this case, however, there is no indication of malarial trouble; so that the peculiarity of her history is no doubt due to the erect position maintained during the early part of the day.

Regarding the primary cause of her trouble, that is not quite so clear; there is no history of any gonorrheal inflammation which could have affected the urethra or bladder, as it sometimes does; neither has she any uterine or pelvic disease which would directly or indirectly affect her bladder. It is barely possible that it arises from the change in her social relations: having married late in life—some eight months ago—it is just possible that her family relations may have produced an irritation of the urethra and base of the bladder, which, when once established, is very liable to persist if not relieved by treatment. Having an opportunity of examining this patient's urethra and the neck of the bladder, the probability is that we shall find a hyperæmic condition and perhaps some tendency to ulceration of these parts, but of that we cannot speak positively, as the examination has not yet been made, nor shall we trouble her with such examination until we see if we can relieve her by treatment.

In the treatment of this case we will render the urine as bland and non-irritating as possible, by permitting her to drink freely of the alkaline mineral waters—Vichy for instance—and in case she cannot procure that, we will order the acetate of potash. At the same time I will give here a favorite prescription in these cases:

℞.—Fl. Ex. Buchu, ... ℥ij.
Tinct. Conium, ... ℥j.
Sig. ʒj half an hour before meals.

If this fail to give her relief, we will then employ injections of sulphate of zinc, half a grain to the ounce of water, with the addition of a drachm of the fluid extract of hydrastis canadensis. In using this local application we will employ a syringe with rather a large nozzle, which is to be introduced just within the meatus, then slowly and carefully inject the mixture so as to force it along the urethra into the bladder; being careful to have the bladder emptied previously. By adopting this plan we are sure of bringing the remedy in contact with the entire mucous membrane of the urethra. We will also request her to abstain from coition, as that may be the cause of her trouble.

CASE II.—I have here a very interesting case, brought to me by Dr. Stewart. This lady is forty-five years of age, unmarried. She gives us the following history: Up to six weeks ago she menstruated regularly every four weeks; since four weeks ago she has menstruated three times, she is therefore suffering from menorrhagia. She has great pain in the back and suprapubic region, with frequent and painful urination; altogether, suffering extremely, she says. I am now making but very little pressure upon the abdomen, and yet she complains very much. Upon examination I find an extremely interesting pathological condition here. Now bear in mind the prominent symptoms: there are intense backache and pain in the supra-pubic region, with an abnormal condition of the menstruation, and a frequent desire to urinate. Dr. Stewart, in carefully examining the condition of the sexual organs discovered conditions which did not altogether coincide with her history as given by herself. He found the uterus large and well developed, with an os externum which looked as if it had seen service; the same also with the perineum. Upon being questioned very closely, or, as they say in law practice, "cross-examined," she admitted that she had had a child five years ago, and had been also operated on for amenorrhœa.

This gives us a clue as to the cause of the present condition of things which we have here. We find the uterus is large and the fundus is pointing towards the upper part of the symphysis pubis, the os looking towards the hollow of the sacrum; the body of the uterus is therefore pressing upon the bladder and crowding it downward—a condition which is sufficient to account for this frequent urination. The uterus is anteverted, and the prominent symptom is the functional disturbance of the bladder, due, no doubt, to the displacement. I here show you a specimen of her urine. We often have symptoms of cystitis without cystitis being established. In this case we have vesical tenesmus because of the pressure of the fundus uteri. A normal bladder will tolerate pressure for a time, but after a while it will incite this frequent urination; it is therefore a question whether or not we have cystitis here. You will observe in this urine that there is an abundant deposit of the phosphates; if this clear up upon the application of heat, and we find no products of inflammation under the microscope, we will simply say that this is a mechanical derangement of function.

There is, however, another unfortunate condition here, and that is, that while the uterus is anteverted, it remains there in spite of all our efforts to restore it. It is anteverted and fixed in this position because of a former peritonitis. If she has been subjected to an operation for the relief of amenorrhœa, she has been in the way of having pelvic cellulitis or peritonitis, or both, and the evidence is that she has had one or both.

We have here, then, an incurable anteversion; all that we can do is to relieve the symptoms; we cannot remove the cause of her pain, backache, and vesical tenesmus; we can only modify these, while hoping that she will live long enough to pass the menopause and be relieved by the final involution of the uterus. The plan of treatment will be to try and relieve her general condition. This urine shows her nervous system to be below par; when we have this brick-dust deposit, it is said to be a symptom that the waste of the tissues is in excess of the assimilation for their support. It is said of clergymen that the deposit of phosphates in the urine is greater upon Monday than any other day in the week, by reason of the using up of the nerve force on the preceding Sunday. It is possible that we may improve this woman's general health so that her system will be able to tolerate her local difficulty, and thus bear her suffering much better.

It is impossible to use a pessary in this case as the uterus is fixed; part of her vesical irritation may be due to the fact that her old peritonitis involved the peritoneum covering the bladder, so that now it is impossible for that organ fully to distend. This peritonitis has probably extended in front of the broad ligaments, forming adhesions, and thus holds the bladder in a splint so that it cannot extend; this may be another cause of her frequent urination. So that we have here two factors: the displaced uterus, and the thickening of the peritoneum upon the walls of the bladder, which prevent its distention. We can do little but apply the douche and paint the vaginal roof with iodine; we can also introduce a belladonna suppository if advisable. This, however, as I have told you, can only be palliative.

This case is an exceedingly important one, as those who are most prone to this condition are those who abuse the generative functions.

There is one thing more here which however hardly comes under my Chair We find above the umbilicus a marked pulsation which may be an aneurism of the aorta, and which might possibly account for some of the abdominal pains.

CASE III.—This patient is twenty-six years of age, and she informs me that she first commenced to menstruate when she was eleven years of age. She has now been married seven months; her menstrual flow previous to marriage appeared every two weeks, but since that time she has menstruated once a month until within the last three months, when she has menstruated once in two weeks, as previous to her marriage. She now states that she has a frequent desire to urinate, and she is not relieved when she has passed water. She has vesical tenesmus, this is accompanied with some pain; her bowels are also constipated.

Now this is a very interesting history. First, abnormal menstruation, becoming normal after the change in her social relations, and then after a time again becoming abnormal. This is a marked violation of an essential law relating to menstruation, and the one which I dwell most upon in my didactic lectures, viz., that each individual should abide by the rule which she takes upon herself. If she start out in life to menstruate once in three weeks, that is normal for her, and she should continue to do so.

Now on examining this patient, I found the os pointing directly towards the introitus, and the fundus towards the pubes, the uterus being doubled up, both body and cervix being flexed forward, so that the two parts together make pressure upon the bladder, which is in all probability the explanation of her desire to urinate constantly; she informs me that she has to get out of bed several times during the night to urinate. The mechanical pressure in this case is disturbing the functions of the organ.

In this case, if we remove the cause we will in all probability remove the cystic irritation, and possibly correct the menstrual derangement. Sufficient to say just now that we will employ the usual treatment for anteflexion of the uterus, and, if we can overcome that, all the symptoms will subside.

CASE IV.—This patient, a married lady, menstruated regularly until four years ago. She comes to us to-day complaining of some disturbance of the bladder. I think I shall be able to illustrate to you a prolapsus of the bladder, which gives rise to much annoyance in this case. Now, here, as you observe, we have both walls of the vagina coming down; here, also, we find from one-half to three-quarters of an inch of laceration of the perineum. The posterior vaginal wall, as you will observe, is not prolapsed as much as the anterior wall and the bladder.

Now, as I introduce the sound into the urethra, it should, of course, pass in an upward direction, but, as you can see by the arc the handle of the instrument describes, it passes backward, giving us the diagnostic sign of prolapsus of the bladder and upper portion of the urethra. These parts have been torn away from their original support and carried downward, the bladder and the urethra have parted company with the structures of the pelvis which support them; this, therefore, would result in partial incontinence of urine, owing to the undue pressure brought to bear upon the sphincter of the bladder.

Incontinence, however, is most marked when the prolapsus of the bladder is in the first degree; in complete prolapsus incontinence disappears, and gives place to difficulty in urinating. I have seen some cases where the bladder had to be restored to its position before it could be emptied; in such cases I have instructed the patient to urinate while lying down upon the face. I remember being called in a case of this kind, in which the uterus was atrophied and the bladder rested upon the floor of the pelvis. She was unable to empty the bladder while in the erect position, but the moment the patient turned upon her face in the reclining position she could urinate with great comfort, and for the rest of her life I believe this patient will have to urinate in the knee-chest position. It is well to bear this point in mind.

In the case before us we must endeavor to do something to relieve her, as during the ensuing warm weather this prolapsus and partial incontinence of urine will be a source of great irritation and annoyance. I would, therefore, advise that she have perfect rest; tampon the vagina until this organ regains some tonicity, restore the perineum, and then introduce an anteversion pessary. Sometimes the restoration of the perineum and rest will suffice, but in other cases we fail with all the means which we have named, because the pessary does not come down far enough to keep the bladder in place. There is, however, a little instrument recently invented by Dr. Malcolm MacLane, of Harlem, which answers when the anteversion pessary fails. This consists of a little grooved instrument, which is passed under the arch of the pubes lying up against it, which is secured by a cord attached to it and passed around the abdomen, the only difficulty being that the two bars running up on each side of the meatus cause some irritation, but it really answers the best purpose in these cases when rest, restoration of the perineum, and all other pessaries fail.

A question here arises, viz.: If you support the bladder and urethra, and retain them in position, will the attachments ever become restored? To this I must answer that I do not know. I have seen a large number of these cases, and watched them with great interest, but I have not yet seen any case in which such an event took place. My experience would lead me to say that they are never entirely cured, although made quite comfortable by proper treatment.

Case V.—This patient now before you is fifty-three years of age, has been married twenty-six years, and has three children. She is now suffering from prolapsus uteri, and also prolapsus of the bladder, as you all observe. This tumor projecting from the vulva is the uterus, bladder and vaginal walls. When I pass a sound up to the fundus, I find that the uterus is four and a quarter inches in length, showing it to be very much larger than it ought to be in a patient of this age. This which I now hold between my thumb and finger is a portion of the bladder. I need hardly add that we have here a well-defined prolapsus uteri in the third degree. We are sometimes in doubt as to the degree of prolapsus in some cases, but here we are fortunate enough in having it so clearly defined as to be unmistakable. Now, to prove to you that this is the bladder which I hold in my hand, I pass the sound into it, and in place of the instrument taking an upward direction it curves downwards, and those who are near by can see that I can put my finger upon the point of the sound within this sac in my hand, you can see it move my fingers. We have then complete prolapsus of the bladder as well as of the uterus. I will now carry the uterus up to its place in the pelvis, and in doing so you see that I press the cervix backward. If I did not do that, I should transform the prolapsus into a retroversion of the third degree. On making pressure I am very careful to carry the fundus upward. Sometimes it is impossible, as the uterus will double upon itself, the fundus falling backward; we then transform it into a retroflexion. In such cases it is then necessary to pass the sound into the uterus and guide it into position by this means.

In this case we have also an anatomical lesion of the perineum, and in addition to this we have also a functional lesion, a relaxation of the muscles. When I make pressure backwards there is not much muscular resistance.

Now the point which I wish you to carry in your mind is the changes which occur in the other organs of the pelvis owing to this uterine displacement. In addition to the uterus becoming displaced, the bladder also comes down with the uterus; and in all these cases of displacement, if they have existed for any length of time, the vaginal walls become relaxed, which leads to or follows the abnormal position of the uterus.

Sometimes we have only one vaginal wall prolapsed; usually, however, both. In this case both of these are entirely out of the pelvis, as you see, but the posterior vaginal wall does not come down so far as the anterior. In managing a case of this kind, just do as you see me now, push the uterus up in position, keep the patient in the recumbent position, and use the vaginal tampon to retain it there. I have just such a case at the present time in my private practice. Before the uterus was restored to place, she spent most of her time in urinating. Now I have her lying in bed under the treatment I have just described, and she can retain her urine as long as anyone. When the relaxation has been overcome to some extent, and the parts have regained their tonicity, we will restore the perineum in this case so as to get as much normal support as possible, making a restoration of which at first appears to be more than is necessary to compensate for the tendency to prolapsus.

So we bring the vivifying process a little higher up into the vagina and bring together as much tissue as possible, making the perineal body run up into the vagina, so as to make a support for the bladder. But even then, in some cases, you will find that in time the bladder will gradually slip down, so that, perhaps, this lady will come back at the end of a year and say that our operation did not do her any good. We will have, however, gained much, having secured a good perineum upon which to rest a globe pessary. We will follow out precisely this treatment here, keeping the parts in position for a time, then by and by restore the perineum, and afterwards introduce the globe pessary, if need be.

Case VI.—Our next case is also one of incontinence of urine; the cause, however, of this condition in this patient is entirely different from that of the preceding ones, and therefore must not be arranged under the same head. The patient, however, comes to us suffering from this incontinence, and I now present her to you as illustrating another cause of this difficulty. This little girl is twelve years of age. When she was three years old she had an attack of scarlet fever, and has never been well since; she has not accomplished much in the way of growth or development; she looks somewhat anæmic. During the night she has to get up six or seven times to pass her water, and, unless exceedingly tired, the desire always awakens her. During the day the passing of water is equally, or more, frequent; for this reason she has been unable to attend school. This is very interesting, as it illustrates a class of cases which you will meet quite frequently. When urinating there is always pain, and she informs me that, if she attempts to restrain herself, it increases the pain; but immediately upon evacuating the bladder there is complete relief for a time. For the last nine years this has been going on. It is, however, a rare thing as a rule in this difficulty for the patient to awaken at night, the urine being generally passed in bed. This is a most miserable condition for a child to be in, being obliged to get up to urinate many times every night, or else to sleep in a bed saturated with urine.

Acute cystitis often follows the eruptive fevers, and sometimes in these cases it becomes chronic, as in this case, so that we should always be on our guard in the eruptive fevers and see to it if there is any cystitis following, otherwise the result will be the same as in this case. Now, whether the child has general cystitis or an inflammation of the neck of the bladder with urethritis remains to be seen. The way to make the diagnosis is repeatedly to examine the urine, selecting the last drachm or two which is passed, and if it contains pus and epithelium we may be tolerably sure that there is general cystitis. The order of the development of the pathological conditions in this case is as follows: first, scarlet fever, which gave rise to acute cystitis, or urethritis, which in place of ending in recovery, ran into the chronic or continuing variety.

ORIGINAL ARTICLES.

GLANDULAR HYPERPLASIA AT THE VAULT OF THE PHARYNX.

BY J. SOLIS-COHEN, M.D.,
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IN many individuals, chiefly adolescents, and according to my own experience most frequently females, imperfect nasal respiration with impaired enunciation will be found to be due to hyperplasia or exuberant overgrowth of the conglobate mass of glandular tissue normally situated at the vault of the pharynx directly behind the upper portion of the septum of the nose. The hypertrophied tissue blocks up to some extent the posterior outlets of the nares. It thus mechanically interferes with normal nasal respiration, and produces the peculiar intonation acquired when resonance is lost in the nasal passages. The intensity of these symptoms is proportionate to the amount of occlusion of the nares. Additional symptoms are usually present, similar to those attending a protracted cold in the head, but unaccompanied by discharges of mucus from the nostrils, unless catarrh of the nasal passages coexists with the condition under consideration.

Although this affection did not prominently attract professional notice until after rhinoscopy was introduced into medical practice, it had long before been recognized post-mortem, and been accounted for pathologically. Some exquisite preparations of this glandular tissue, in both normal and morbid conditions, prepared more than a hundred years ago by the celebrated William Hunter, are preserved in the anatomical section of the Hunterian Museum at Glasgow.

For recognition of this affection during life, the profession is chiefly indebted to Prof. Voltolini, of Breslau; for anatomical descriptions of the tissue and its relations to other structures, to Prof. Luschka, of Tübingen; and for its careful histological and clinical study to Dr. William Meyer, of Copenhagen.

Except in individuals with defect in the palate, the glandular tissue at the vault of the pharynx cannot be observed during life without the rhinoscopic mirror. Hence the comparatively late date of its recognition.

It consists of adenoid tissue, identical in structure with the tonsils, and the agminated glands of the intestine. Its similarity to the tonsil has caused it to be termed the *pharyngeal tonsil*. It is most usually described as the adenoid tissue of the vault of the pharynx, and its hyperplasia as adenoid vegetation.

The hyperplasia presents two different forms, between which and beyond which there is a variety of gradations. These two forms are, macroscopically, a uniform hypertrophy similar to ordinary hypertrophy of the tonsil, and a series of dendritic outgrowths in pendant clusters. The clusters of outgrowths are isolated in some instances, and in close apposition in others. They are quite pink at the base, and become much lighter in color at the apex. They are occasionally so abundant as quite to cover the vault of the pharynx, and occlude much of the calibre of the cavity. In occasional instances, too, they extend along the lateral walls of the pharynx. Their free surface is usually smooth, though sometimes villous. They are often so soft in consistence that they bleed on palpation, or when rubbed with a sponge or cotton-wad, or even when impinged upon by a stream from the syringe. Microscopically, the mucous membrane is seen to have participated in the hyperplasia, so that, in consequence, isolated fields, or small sections, often resemble papillomata. The main portion of the mass, however, consists of lymphoid, or immature connective-tissue cells. Bloodvessels are few, but blood-channels are seen at the periphery.

The tissues immediately surrounding the diseased structure, be it hypertrophic or fimbriated in variety, are usually in a state of chronic catarrhal inflammation. A condition of hypersecretion usually exists. In the purely hypertrophic variety the mucus often undergoes desiccation in *sitû* with a series of scabs, which become detached at intervals of a few days; provoking a little bleeding at times, when the tissue is soft and succulent. From a similar cause some patients are troubled by blood in the mouth almost daily on awakening.

In the dendritic or fimbriated variety of the disease, the mucus is liable to drop from time to time, and thus provoke cough, often referred to disease of the larynx. Sometimes it descends the posterior wall from time to time in viscid, discolored strands or masses. When the hyperplasia extends as far as the pharyngeal extremity of the Eustachian tube, disorders of hearing, catarrhal or mechanical, are frequent. Peculiar headaches ensue in some instances, usually referred to the top of the cranium, but really proceeding from its base at the point where the tissue in question is located.

The affection is often easily diagnosed by the symptoms incidentally alluded to, and the diagnosis is placed beyond doubt by inspection rhinoscopically, and by palpation.

The affection requires surgical intervention when the masses obstruct nasal respiration, or are in a condition of hypersecretion. The plan pursued by me during a long series of years, consists mainly in excision in fragments by means of curved forceps with cutting cup-shaped blades, passed behind the palate: instruments practically the same as those devised much more recently by a number of specialists abroad and at home. A properly guarded electrocautery is useful when the growths cannot be grasped by the forceps. Such cases have been very infrequent in my own experience. For this purpose I have used either an electrode guarded in front by soft or hard rubber, so as to avoid burning the palate; or, in more recent work, an electrode made to be pushed forward and retracted at will through an insulating canula.

Injections of a solution of bicarbonate of sodium will relieve the pain produced by the incandescent cautery, when that is severe.

A number of operations are required to get rid of these growths, in the manner recommended; but I consider the method far preferable to prolonged efforts to rid the pharynx at once. Serious reaction has followed attempts to do too much at a time. The manipulations should be performed under guidance of the rhinoscopic mirror when practicable; when immediate rhinoscopic supervision is impracticable, the manœuvres should be practised under guidance of a finger of the disengaged hand. Under all circumstances the parts should be examined rhinoscopically after each operation. Bleeding is slight after excision with forceps, much slighter than after the use of ring-knives or sharp spoons. I have no practical acquaintance with the removal of the growths with snares, cold or incandescent.

In children, it is often practicable to tear these growths away with the finger-nail; a practice preferable to the use of cutting or burning instruments, though more bloody than the use of forceps. It is unnecessary to cauterize the parts or inject astringents upon them after the use of the cutting instrument. It is far better to leave them covered by the blood-magma which coagulates upon them.

After a large portion of the mass has been removed, sufficient, say, to reëstablish free nasal respiration, there is no absolute necessity to continue the ablations; for the remaining shreds, injured in their nutriment, usually shrivel into harmless insignificance.

No recurrences of hyperplasia after treatment have occurred to my knowledge, in my own practice, although inquiries have been made concerning patients where growths were removed by forceps more than fourteen years ago.

There is a natural tendency to spontaneous absorption of the tissue under consideration, after the patient has reached, say the twenty-fifth year. In this respect the analogy is maintained with the behavior of the adenoid tissue in the tonsil and in the solitary follicles of the intestine. Instances of hyperplasia are rare after development to full maturity, unless in subjects affected for several or many years. It becomes a question, then, whether it is proper at all to operate in children and adolescents, seeing that the condition may subside spontaneously in early adult life. This question receives an affirmative response in view of the injury to general health, and the impairment of hearing and of enunciation, apt to result from years of continuance of the infirmity.

Although impracticable in many instances to trace a connection between the affection discussed and scrofulosis, or any other diathesis, it has been my custom for years to employ antiscrofulous constitutional treatment with advantage. Two remedies, mainly, have been selected—the one for its specific influence upon glandular hyperplasia generally, and the other for its specific influence upon secreting mucous membranes. The one is the hydrated chloride of calcium in simple syrup, thirty or more grains daily in divided doses; and the other, the oleoresin of cubeb, ten to twenty-five drops, on sugar, immediately after meals.

SUDDEN DEATH DURING OR SOON AFTER CONVALESCENCE FROM DIPHTHERIA.

By J. FERGUSON, M.A., M.D., L.R.C.P.,
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What the experience of other physicians may be regarding sudden deaths during the progress of diphtheria I cannot venture to say, as I have not been able to collect many cases which bear directly upon the question. I shall briefly mention three fatal cases that occurred under my own observation, more for the purpose of eliciting from others a record of such experience as will throw some light upon this feature of the disease.

Case I.—Frank W., a young man of twenty-one, was taken ill with an attack of diphtheria in August, 1882. He made a good recovery, with the exception of slight paralysis of the right arm. While sitting on a log of wood, near the front of the house, he quickly picked up a stone and threw it at a small bird, which was hopping along on the ground near him. He had scarcely projected the stone from his left hand when he fell over from his seat, and expired before he could be carried into the house.

At the post-mortem examination, the left side of the heart was found empty, while the right was distended with blood. This condition had no doubt been produced by a sudden paralysis of the organ. When Frank threw the stone, the heart had contracted with sufficient force to empty itself; but, ceasing to act, the right passively filled with blood which it could not expel. In such a condition as this, the effort at breathing—indeed, the deep-drawn sigh—would bring the blood to the chest from the jugulars, the subclavians, and the inferior vena cava, for the purpose of filling the right side of the heart. The pulmonary veins, lying in the cavity of the thorax, would not be similarly acted upon during inspiration. Should the death take place very suddenly, the left ventricle might be almost devoid of blood.

Case II.—Charlie H., aged five, was taken down with diphtheria in April, 1883. To all appearance this case was doing well. His bowels moved, and his mother placed him upon the chamber. At this juncture, I visited the house. On entering the room, the little patient said, "I am weak, put me in bed." This was quietly and quickly performed;

but after some few minutes of restlessness he expired.

The post-mortem revealed the heart to be full of blood, the right side more so than the left.

CASE III.—Annie W., aged thirteen, an active young girl, was attended by another physician during her attack. She recovered sufficiently to be sitting in the parlor. While there, her little sister, who was also ill of the same disease, died. She became at once so much affected that she had to be carried up-stairs to bed. I was sent for, and on arrival found her in an extreme state of collapse. Fearing to try stimulants by the mouth, I gave them hypodermically; but she died in about one hour from my arrival. No post-mortem.

Now, what is the cause of these sudden deaths? In the first place, it cannot be due to the mere presence of some poison circulating in the blood, and thereby injuring the nerve-centres; for two of the above cases might be fairly regarded as having recovered from the disease. In the case of Charlie H., there might be some ground for supposing that the cause of the heart's failure was due to a poisoned state of the blood, as the child was then under the influence of the disease. In the next place, the theory of Edward Woakes, of London, could hardly explain the first and third cases I have just recorded. This theory was enunciated at the International Medical Congress, in London. It claims that sudden death is due to a vaso-motor paralysis of the nutrient vessels of the vagi, so that these nerves are gorged with blood, and the fibrillæ jugulated to such an extent that they are unable to conduct inhibitory impulses, and the heart speedily wears itself out, being exhausted by a succession of rapid beats. It seems very difficult to explain how this gorged and jugulated condition of the vagi could exist and cause death so suddenly as in the case of Frank W., who had convalesced so far as to be out of doors.

We know that strong emotions produce marked effects on the heart, and especially if the person is of an excitable turn. After a prostrating disease, such as diphtheria, where the tendency to produce nerve complications is so great, the sympathetic or motor cordis, the vagi, or inhibitorius cordis, and the ganglia in the substance of the heart are very much weakened. In such a condition, a slight impulse or emotion acts so powerfully through the mind on the heart, as to produce an amount of derangement in its action sufficient to cause sudden death. That there is much in the theory of Woakes which is deserving of attention, I do not deny; but I feel that it cannot explain such cases as the first and third, and that we are forced back to the opinion, that there is still something wrong in the nervous system during and after this disease which cannot be explained by any known change in them; call it functional, if you will.

I have already said that, in cases where sudden death occurs when the patient has recovered from the disease, I do not think this sad termination is due to the actual presence of poison circulating in the blood, and coming into contact with the nerve-centres; yet the sudden death could follow as a direct result of the depressing influence this poison had upon them during the continuance of the disease. Though this poison no longer exists, yet the weakened state of the nerve-centres exists; and a strong emotion or a sudden effort proves too much. The effort or emotion is the extra straw that breaks the camel's back. The weakened nervous system, which can just carry on the great involuntary functions of circulation and respiration, while everything is quiet, suddenly fails when an extra task is imposed upon it, of either a physical or an emotional character. From two of my cases, I firmly believe that the condition is central, and not peripheral; but what that central condition really is remains for the future to reveal. I regard it as a depraved and weakened one. If I am asked why it should occur with dipththeria, I can no more answer the query than tell why the poison of typhoid fever causes the very circumscribed congestions which produce the rose-colored spots.

In the case of Charlie H., I made a careful microscopic examination of parts of the vagi; but with negative results. No evidence could be found of the existence of a hyperæmia, nor of plastic effusion, within the nerve-sheaths, as one would expect were the theory of Edward Woakes true, as this case died during the progress of the disease.

FIVE OVARIOTOMIES.

BY THEOPHILUS PARVIN, M.D.,

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THE following are the only ovariotomies I have performed during the present year. It will be observed that they all occurred within a period of less than six months.

CASE I.—The first case was that of Mrs. W., twenty-two years of age, who had been married between one and two years. She resided at Loogootee, Ind., and was under the care of Dr. S. H. Brittain, to whom I am indebted for the following[1] history of the patient, and of the operation and after-treatment.

"Mrs. W. came under my care the last of January, 1883. She first noticed a lump in her left side about one year ago, it steadily grew since that time; absence of menstrual flow since October; she was emaciated, feeble, pulse 120, temperature 101°, abdomen so greatly distended that she could not lie down. My diagnosis was ascites and an ovarian tumor. For the purpose of making her more comfortable, though I believed she could live but a short time, I performed paracentesis abdominis, removing nearly two gallons of ascitic fluid. After this she could lie down, but otherwise there was no improvement in her condition until the fifth day; then her appetite and strength were increased, and she did very well for two weeks, when the peritoneal cavity began to fill again. On the first of March, assisted by Dr. Trueblood, I tapped again, but first directly passed the trocar into the ovarian tumor;

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[1] In justice to Dr. B., I ought to state that in rewriting I have condensed somewhat this history.

only a few flakes of cheesy matter escaped, and this not until the cyst contents had been partially broken down by a probe passed through the canula. The canula was now withdrawn from the cyst, and one and a half gallons of fluid taken from the peritoneal cavity. Her improvement after this was so rapid, that I was encouraged to believe ovariotomy was advisable, and wrote to Dr. Parvin, requesting him to visit the patient for this purpose. He replied, directed the preparatory treatment, and in company with Dr. L. S. McMurtry, then of Louisville, now of Danville, Kentucky, came to see Mrs. W. on March 15th. After we had all carefully examined the patient, who was now very feeble, pulse 125, temperature 100°, and after the matter had been fairly presented to her and her friends, an immediate operation was decided upon.

"The patient was etherized by Dr. Trueblood, and an incision made from just below the umbilicus to two or three inches above the pubis; when the abdominal cavity was opened, about two gallons of fluid escaped. The tumor, adherent at few points, and these adhesions not extensive, was punctured with an ovariotomy trocar; but the contents of the first cyst opened as well as of others, for the growth was multilocular, were so thick that they could not pass through the canula; the instrument was therefore withdrawn, and the hand used to scoop out the half-solid material. After thus reducing the size of the tumor, it was readily withdrawn through the abdominal opening; the pedicle, the left broad ligament, was quite long, and a clamp was applied to it; it was then divided by Paquelin's thermocautery between the clamp and the tumor; a blunt needle threaded with a double ligature of fishing-silk was carried through the pedicle below the clamp, the silk firmly tied on each side, then the two halves united in a single ligature encircling the pedicle and also firmly tied, the ends being cut off short. After thoroughly sponging the abdominal cavity, removing some blood-clots and some of the cyst contents that had escaped into it, the clamp was removed and the stump of the pedicle dropped into the abdomen. Deep silk stitches, with intervening superficial horse-hair stitches, were used to close completely the abdominal incision, except at its inferior angle, where a drainage-tube was passed. Carbolized cotton and oiled silk were placed over the incision, absorbent cotton put over the abdomen, all secured by a firm flannel bandage. She was then put in bed, bottles of hot water placed about her limbs and body, the temperature of the room increased, and a hypodermatic injection of morphia given.

"*March 16.*—Pulse 133; temp. 101°; urine drawn by a catheter three times in twenty-four hours, about four ounces each time. Patient resting well. Diet, hot water, and occasionally a tablespoonful of rice water.

"*17th.*—Pulse 135; temp. 101½°; somewhat annoyed by flatus, but relieved by the introduction of a tube in the rectum.

"*18th.*—Pulse 139; temp. 102°; urine scanty; gave small doses of infusion of digitalis and acetate of potash. Milk added to the rice water diet.

"*20th.*—Pulse 110; temp. 100½°; secretion of urine is free, and it is passed voluntarily.

"*21st.*—Pulse 108; temp. 99¾°; no important change.

"*22d.*—Pulse 102; temp. 97°; brandy given, and an improved diet. A purulent discharge through the drainage-tube, and the evening temperature increased.

"*23d.*—Pulse 96; temp. 98¾°; removed the silk stitches, replacing them by strips of adhesive plaster.

"*24th.*—Pulse 94; temp. 98¾°; disposition to a movement of the bowels, which was assisted by a warm-water enema.

"Until the 29th but little change; pulse and temperature becoming normal; some diarrhœa, for which occasional doses of camphorated tincture of opium were given.

"*29th.*—Removed horse-hair stitches. Pus still discharging from the drainage-tube, and wound shows a disposition to reopen.

"*May 15.*—Patient has steadily improved; the drainage-tube was removed soon after previous date, the gap closing by granulation. She is now in good health, save occasional attacks of intermittent fever; before she came under my care she had been living in a very malarious part of Illinois."

I will merely add to Dr. Brittain's faithful narrative, that Mrs. W. menstruated first after the operation in June (the right ovary, examined after the removal of the tumor, was found healthy), and that she has been regular since. She is now, as Dr. Brittain informs me in a letter received last month, in good health.

Case II.—The second case was that of Mrs. J. L., formerly of Brookville, and who was directed to me by my friend, Dr. George Berry, of that place. Mrs. L. was forty-two years old; married, had three children, the oldest thirteen, the youngest eight years old; since the birth of the last had one miscarriage; menstruation regular; five years ago first noticed a tumor in the right side, it has gradually increased until the abdominal circumference is thirty-nine inches. For some months past she has been losing flesh and strength; becomes fatigued with even moderate exertion; pulse generally from 90 to 100.

She entered St. Vincent's Hospital, Indianapolis, July 10th, taking a private room, and was operated on the next day, July 11th. I was assisted in the operation by Dr. Joseph Eastman, who has been a tried and ever-trusted assistant in sixteen of the ovariotomies I have done, by Drs. Maxwell, Button, Long, and my student Mr. H. S. Rooker, all of Indianapolis, and by Dr. Newcomer, of Tipton, Indiana.

The patient was etherized; an abdominal incision three inches long was made, and then increased one inch. The tumor, which was a monocyst, had no adhesion and, after its contents were evacuated, readily collapsed and was withdrawn; the pedicle was four inches in length, broad and thin, and a double ligature was passed through it, and tied as in the previous case, when the tumor was separated by the thermo-cautery, and the stump dropped in the abdominal cavity. Weight of cyst and contents thirty pounds; the color of the fluid was that of pea-soup, and the consistence that of cream. The abdominal wound was closed by silk sutures, and iodoform freely sprinkled over it; a very thick layer of absorbent cotton was placed upon the abdomen, and a flannel bandage firmly applied. Very little shock was observed; considerable ether-nausea troubled the patient, for the relief of which occasional teaspoonfuls of hot water were given, as first advised by Dr. Keith. The third day the temperature was 102°, and the pulse 120; a somewhat troublesome diarrhœa came on the fifth day, and continued eleven days before yielding to dietetic and medicinal means. The stitches were removed on the tenth day, and on the eighteenth she left the hospital, being quite well, and has so remained.

CASE III.—On the 11th of July I performed a second ovariotomy. Miss H., thirty-six years of age, first consulted me the middle of May. Two years before this date she noticed an enlargement of the abdomen, but no defined tumor. The enlargement increased so that she seemed like a woman far advanced in pregnancy, and yet for some time after this she continued her work, that of a clerk in a dry-goods store. Finally her health became so impaired that she had to give up her place, indeed was confined to her bed much of the time. Upon examination I found a large tumor, apparently divided by a transverse constriction about the level of the umbilicus into two unequal parts; in the lower part fluctuation was plain, but the upper part was fixed, firm, resisting, and fluctuation was indistinct.

Several reasons led me to advise tapping before performing ovariotomy. In the first place, to confirm the diagnosis; next, I hoped by temporarily lessening the mass to give the patient comfort, improve her health and strength, so that she could better bear the final operation, for her condition was very bad; beside, believing that the upper part of the tumor was adherent, I had a hope that when the lower portion was emptied, gravity might put those adhesions somewhat upon the stretch, and thus one of the difficulties and dangers in operating would be lessened. Tapping was twice done by Dr. Eastman, once in my temporary absence from the city, and the other time when I was present; each time a bucketful of glue-like fluid was obtained from the lower mass, but the upper was unchanged in size, position, and solidity. The second time an effort was made to aspirate the upper portion of the tumor, but only a small quantity of ovarian fluid was obtained, and the operation was followed by some bleeding.

Under the use of a liberal milk-diet, quinine and iron, there seemed, sometimes, a slight improvement in the patient's health, but irregular attacks of chills, followed by high temperature, nausea, and vomiting, and subsequent loss of appetite destroyed the little gain. More than once when a day had been fixed for the operation a postponement was rendered necessary by these attacks.

Finally, however, as before stated, the operation was done on the 11th of July. Ether was given; an abdominal incision of three, subsequently increased to ten, inches was made; the lower portion of the tumor was emptied by an ovariotomy trocar and canula, and a similar effort was made as to the upper part, which had remained almost solid and immovable; but it proved to be a very thick-walled cyst, from the inner wall of which sprang a large number of cysts, varying in size from that of a walnut to that of the largest orange; these were broken up, and their contents scooped out with the hand. Adhesions to the omentum, to the abdominal wall, and to the liver made the removal of the tumor tedious and difficult; nevertheless, this was finally accomplished, thanks especially to my friends Drs. Eastman and Taylor, who applied for me a dozen ligatures to bleeding parts. The pedicle was tied and secured in the same way as in the previous cases; so, too, as to the sutures of the abdominal incision: the iodoform and cotton dressing was used, and a drainage-tube. The shock was very great, and death occurred on the third day, reaction never having been complete. The tumor weighed seventy pounds.

This is the third ovariotomy which I have done when there were adhesions to the liver, and each patient died—indeed, this experience leads me to dread hepatic almost as much as pelvic adhesions. However, this was one of the delayed operations, which are so dangerous. If the patient had been operated on a year sooner than she was, the probability is that she would have recovered.

CASE IV.—This case is given so well by my friend Dr. Kemper that not a word further need be prefixed, not a word need be added:

Mrs. S. L. L., age thirty-two years, native of Ohio, married eight years, nullipara. In the early part of the year 1879, she first noticed abdominal enlargement. The growth was slow, but gradual, and, as months elapsed, the first supposition of pregnancy was, of course, abandoned. Finally, an impairment of the general health becoming perceptible, Dr. Kemper was consulted on the 19th of July, 1883. The tumor was well marked; lines from the umbilicus to the anterior superior spinous processes of ilia showed the left one inch longer. The tumor was readily perceptible by touch through the vaginal walls. No pain had been present, but a peculiar throbbing in the abdomen had annoyed the patient for some weeks past. The menses had been regular. A diagnosis of ovarian tumor was made, and the patient advised to consult Prof. Parvin, of Indianapolis, which she did on the 10th of August. The diagnosis was confirmed, and an operation advised.

On August 16th, at two o'clock P. M., in the city of Muncie, Ind., the operation was performed by Prof. Parvin, assisted by Dr. Eastman, of Indianapolis. The following gentlemen were present: Drs. Vinnedge, of La Fayette; Kemper, Winton, and Boyden, of Muncie; and Mr. Rooker, medical student, of Indianapolis. Ether was administered by Dr. Vinnedge.

An incision, three inches in length, was made at the usual site in the median line. No adhesions were present, and, after withdrawing the fluid, a unilocular sac was readily removed. The pedicle, a moderate sized one, springing from the left ovary, was divided by the thermo-cautery, thoroughly ligatured, and returned into the abdominal cavity. After a thorough cleansing, the wound was closed with the aid of deep and superficial silk sutures, and covered with iodoform. All instruments used were immersed in carbolized water. The entire operation and dressing consumed but twenty-five minutes. Reaction was rapid. No nausea was developed.

No untoward symptoms were subsequently shown in the case. The incision healed by first intention. Menstruation appeared on the 21st, and continued three days. She made a rapid and satisfactory recovery.

Case V.—Mrs. M. S., thirty-five years of age, married sixteen years; has had two children—the first thirteen months after marriage, the second six years after the first; consulted me in July last, at the suggestion of Dr. George Duzan, for a tumor of the left side, believed by him to be ovarian. The tumor was first noticed sixteen months before; it now distends the abdominal cavity, the circumference at the umbilicus being thirty-nine inches. The patient for the last two months has been losing flesh, and her strength is decidedly impaired. I advised an early operation. She delayed, however, until September, and probably would not have been willing to have it done then had it not been that I was about removing from Indianapolis to Philadelphia. The operation was done on September 4th, Drs. Duzan and Brown, of Zionsville, and Dr. Eastman and my student, Mr. Rooker, of Indianapolis, assisting me.

After the usual anæsthesia and the abdominal incision, a non-adherent tumor, consisting almost exclusively of a single cyst containing a bucketful of chocolate-colored fluid, was found, and which, after evacuating its contents, was, of course, readily removed. The pedicle, which was long, was ligated and divided as in the previous cases; the abdominal incision was closed by silk sutures, and the dressing of iodoform and absorbent cotton used.

Dr. Duzan had charge of the patient after the operation, and from his notes I make the following statements:

Sept. 5.—Pulse 80; temperature 98½°.

6th.—Pulse 100; temperature 100°.

7th.—Pulse 120; temperature 103°. Menstruation came on; there was some diarrhœa; gave quinine, opium, and tincture of veratrum viride.

8th.—Pulse 106; temperature 100½°. The diarrhœa continuing, injections of laudanum and tannin were successfully used. From and after the fifth day, the pulse and temperature were normal. On the twelfth day, the stitches were removed, and the wound was found perfectly united. About the 5th of October, there was some swelling of the left leg resembling *phlegmasia alba dolens*, but it soon yielded to rest, an anodyne, and sedative lotion, and bandaging. The patient is now quite well.

Dr. Duzan adds to his letter, which was received on the 27th of October: "I neglected stating that I gave Mrs. S. quinine from the day after the operation until convalescence was fairly established. I never fail to give this medicine after surgical operations, continuing it until wounds are healed." Dr. Duzan's large experience and great sagacity as a practitioner entitle his opinion to respect.

Philadelphia, November 2, 1883.

A RARE CASE OF LARGE CYSTIC TUMOR OF THE POSTERIOR NARES; REMOVAL; CURE.

By GEORGE M. LEFFERTS, M.D.,
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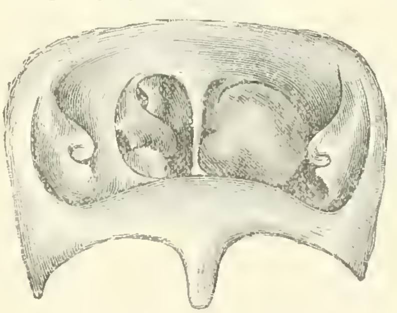
The following case is, it appears to me, of sufficient interest, on account of its rarity, to warrant its being placed upon record:

I was recently consulted by a young lady who desired relief from the ordinary symptoms of a hypertrophic nasal catarrh, which she was supposed to have, and for which she had undergone various plans of treatment, both local and general, for a lengthened period of time.

The main symptom, and the one of which she mostly complained, was complete obstruction of the left nasal passage to the respiratory current. This condition had become progressively worse during the last year.

An examination of the anterior nares by means of the nasal speculum and reflected light, showed nothing but the common appearances—hyperæmia and slight thickening of the mucous membrane—incident to an ordinary chronic catarrhal process (simple chronic rhinitis). The rhinoscopic mirror, used in the examination of the posterior nares, a procedure not before attempted in her case, determined at once the cause, and, as I supposed, the nature of the obstruction to nasal respiration.

A large tumor, smooth, more or less rounded, and of a grayish color, resembling precisely an ordinary gelatinous polypus, for which I at once mistook it, fully occupied and completely closed the left posterior naris, projected outwards into the free space of the upper pharynx, and lay in close apposition to the pharyngeal orifice of the left Eustachian tube. Its removal by means of the nasal polypus forceps was at once determined upon; this instrument in my judgment, affording the quickest and surest method of extirpation.



The first introduction of the forceps, their correct application to the growth being guided, by means of a direct inspection, through the posterior nares before their closure, succeeded in bringing away a large portion of the tumor.

My mistake now in the treatment of this particular patient, and I believe that it is a common one, and therefore mention it here, not hesitating to criticise it, even in my own case, as a bad practice, was in reapplying the forceps to the location of the supposed polypus before syringing away the blood and reinspecting the parts before reintroduction of the instrument. Had I done so, and I have made it a rule since, where it was the exception before, I should have recognized the true character of the growth earlier and spared the patient some unnecessary, even though slight, laceration of the parts in the neighborhood of the posterior extremity of the middle turbinated bone, at which point the tumor was subsequently found to have been attached. Failure to obtain any further portions of the tumor, led me to inspect more closely the portion that I had removed; to my surprise, it proved to be the entire sac of a large cystic growth, broken at only two points; one that of its small point of attachment, the other a small rent, where it had burst in the grasp of the forceps and discharged its contents. This discharge of a large amount of glairy mucus had not been noticed by me; had it been, it might have furnished a valuable clue to diagnosis.

The removal of the tumor at once relieved the patient of the most annoying of the symptoms. Others readily yielded to the treatment of the slight catarrhal condition.

Remarks.—Instances of true cystic tumor, originating in the mucous membrane of the nasal passages proper, are very rare, the invasion of the latter by mucous cysts having their point of primary development in the antrum of Highmore is the rule; but even these cases are infrequent.

I am familiar with but one case in literature similar to that which I here report; it concerned a patient of Dr. George Johnson. The growth was located in the right posterior naris, and, curiously enough, was attached to the posterior extremity of the middle turbinated bone, as in my case. The details will be found in the *British Medical Journal*, May, 1874. One or two writers upon diseases of the nose mention the possibility of the occurrence of such tumors, but fail to report specific examples. Watson (*Diseases of the Nose*, 1875), while giving many interesting instances of cystic tumor of the antrum, says that he can find but one recorded of cyst of the nasal passage (the case of Johnson, before alluded to), and believes that they are very seldom met with.

The interesting question of differential diagnosis suggests itself here. I cannot conceive that there would be any great difficulty in differentiating the primary location of a growth of this character—viz., whether, in the antrum, thence extending to the nasal passage, or in the latter itself. The points upon which a diagnosis must rest will suggest themselves. Between ordinary gelatinous polypus of the nasal passage and cystic tumor of the same locality the question will always be a difficult one to decide. I am aware of no distinctive differences as far as external appearances go. Fortunately, it is not of great importance. The treatment is similar—viz., extirpation. Prognosis as regards recurrence is, however, decidedly in favor of the latter form of growth.

HOSPITAL NOTES.

WILLS' EYE HOSPITAL, PHILADELPHIA.

THE USE OF JEQUIRITY IN EYE DISEASE.

Reported by CHARLES W. KOLLOCK, M.D., Resident Surgeon.

JEQUIRITY has been used for some time past at the Wills' Eye Hospital, in the treatment of obstinate cases of trachoma and corneal pannus, which all other known remedies have failed to improve. The number of cases in which it was used is not great, but is sufficient to demonstrate beyond a doubt its efficacy in those that have continually grown worse under other treatment, or were at a provoking stand-still.

A report of a few cases may prove interesting.

CASE I.—S. G. (service of Dr. Keyser), both eyes had been sore for eight years, but the left had finally been almost entirely cured by other means. The right eye, however, defied all treatment; the lids were thick, hypertrophied, slightly rough, and beefy in appearance. The cornea was entirely covered by a thick fleshy pannus, and at no point was the iris visible. She had light-perception only, and photophobia was intense. An infusion of jequirity was applied, the strength of which was eighteen grains to the ounce. In a few hours the lids began to swell, became stiff and very painful; lachrymation, not marked at first, soon increased, and became, after two or three applications, purulent. Along with the above conditions appeared a whitish-gray and filmy membrane which covered the mucous surfaces of both lids. This became more consistent and adherent as the inflammation increased. Adhesions formed between the pannus, grown puffy and swollen, and the palpebral conjunctiva which necessitated their being broken up daily by the probe. The cornea had in fact every appearance of sloughing, though it was not in the least injured. Six applications were made to the everted lids, when it was deemed advisable to discontinue its use on account of the intense inflammation. The patient was now in anything but a comfortable condition, on account of the constant pain and lachrymation, and could scarcely bear to have the lids touched for the purpose of cleansing. This state, however, was of short duration, for, left to itself, the inflammation quickly subsided, and the swelling, lachrymation, and pain disappeared. A boric acid collyrium (gr. x to ℥j water) was now used several times a day. A small clear spot appeared in the centre of the ulcerating pannus, which increased in size daily, spreading rapidly towards the margins of the cornea. Through the clear space the patient saw distinctly, and each day the vision improved as the pannus disappeared. A month later the pannus was entirely absorbed, the lids were smooth and soft, the cornea was hazy from cicatrices and facets, the iris was visible at all points, and vision was improved from light-perception to counting fingers at three feet. In this condition the patient was discharged.

CASE II.—C. W. (service of Dr. Schell), right eye has been sore off and on for several years; lids in state of dry trachoma and cornea partially covered by pannus. On September 20th, at 8 A. M., first application of a nine grain solution of jequirity was made. At 1 P. M., a distinct film covered both lids, which was easily detached; there were slight pain, lachrymation, and swelling. A second and third application were made that day, and the fourth the next morning. The lids were now very chemotic, discharge muco-purulent, and membrane thicker and more adherent. Four applications were made in this case, the patient having, in the mean time, been compelled to take his bed on account of pain and general uneasiness. The inflammation was left to work its own cure. 22d: Lids considerably swollen, discharge continuous, pannus ulcerating, and cornea intact. By the 27th the discharge had ceased, the lids were smooth, and the cornea was daily becoming clearer. The patient was discharged on October 18th, wonderfully improved, though the vision was not as clear as might be expected. This is accounted for by the number of facets on the cornea caused by the pannus, which, though entirely absorbed, had left its marks firmly imprinted.

Case III.—J. W. (service of Dr. Goodman), an old and obstinate case of granular lids with pannus, which resisted all remedies, and continually grew worse. The lids of both eyes were rough and flabby, the corneæ were covered by pannus, and photophobia was most distressing. Four applications were made to both eyes, with similar results to those above described. A boric acid collyrium was then used, and the inflammation quickly subsided, leaving the lids perceptibly smoother and corneæ clear. Both corneæ were found to be covered by excavations, which caused a great deal of irregular astigmatism. The left cornea became entirely free from pannus, but the right, not progressing so fast, the jequirity was again applied, with like results and improvements. A third time the infusion was used, and the result encouraging. Photophobia, so distressing before the use of the jequirity, is much relieved, and, though the patient is not yet cured, his present condition is so marked an improvement upon the former that there is reason for great encouragement.

Case IV.—C. A. (service of Dr. Hall), chronic case of granular lids and pannus in both eyes. The granulations were prominent and hard. Jequirity was used but twice, on account of the intensity of the inflammation excited. The granulations underwent marked absorption and flattening, and pannus has disappeared.

Case V.—E. C. (service of Dr. Keyser), heavy, flat granulations with fleshy pannus and hypertrophy of mucous membrane. Jequirity applied, with usual results. Ten days later: pannus absorbed, cornea a little hazy from cicatrices, and lids very much smoother. Patient discharged.

Case VI.—C. G. (service of Dr. Schell), lids thick, stiff, and very rough; corneæ hazy from old cicatrices, but no pannus. Jequirity applied three times. Roughness almost disappeared, no discharge, but vision not much improved on account of the cicatrices of old ulcers which were not acted upon by jequirity. Patient discharged.

Case VII.—R. I. (service of Dr. Goodman), lids of both eyes studded with large, prominent granulations, and corneæ streaked by numerous vessels. The granulations were first flattened by the use of the mitigated stick of nitrate of silver (thirty-three per cent.), and jequirity then applied in the usual manner, and with like results. Thirteen days after, the patient was discharged, to all appearances cured, excepting the cloudy condition of the corneæ, which can only be improved by time.

Case VIII.—M. G. (service of Dr. Schell), trachomatous lids very rough, with corneal pannus in both eyes. Two applications of an eighteen grain infusion were made here, causing great pain, swelling, and lachrymation. After subsidence of inflammation, lids were found smooth, pannus entirely disappeared, but cornea covered by facets, which prevent distinct vision.

Remarks.—The preparation of jequirity used, is a cold infusion prepared by Mr. L. E. Sayre, at Eighteenth and Market Streets. The strength of the infusions was, in all cases but two, nine grains to the ounce; in the two it was eighteen. The latter was found too severe in its action, and for that reason its use was discontinued. These preparations are very prone to decomposition, and when in that condition give out a most offensive odor; but the power of causing inflammation is as active as when freshly prepared. To prevent this decomposition, which rendered its use very disagreeable both to patient and physician, it was decided to try the effect of boric acid in the preparations. Accordingly, Mr. Sayre added to each ounce of the infusion, four grains of the acid. The results surpassed our most sanguine hopes, for not only were all preparations kept pure and sweet, but the action was not in the least diminished.

The infusion is applied to the everted lids by means of a camel's-hair brush, or a swab of absorbent cotton—the latter is preferable on account of cleanliness.

It has been observed that pain is first noticed about four hours after the application, and simultaneously the lids begin to swell, and the filmy deposit appears on their mucous surfaces. Its action should be watched most carefully, for though no case of sloughing cornea has followed its use here, it might easily be a sequel through carelessness and inattention. Its use should be discontinued when the lids become chemotic, mucous surfaces well covered by the membrane and the discharge muco-purulent. Pain is in the majority of cases quite severe, but soon ceases after the applications are stopped. The discharge is very tenacious and rarely escapes beyond the lids.

Corneal opacities, *i. e.*, cicatrices of old ulcers, are not removed by jequirity. Its use upon acute granulations, etc., is not warranted; for, though it seemingly makes them no worse after its discontinuance, still they are not in the least improved. A marked improvement in vision has not been seen to follow its use unless the pannus was complete. This is accounted for by the condition of the cornea, which closely reminds one of a hammered button, with the light glistening from its numerous surfaces. This causes for the time being an irregular astigmatism, which of course prevents accurate vision for such objects as test-letters, and is the reason why the vision has not been recorded in the report of these cases.

It will be readily seen from the above report that only chronic diseases, such as trachoma, granular conditions, and pannus seem proper cases for the employment of jequirity. Its use in acute troubles has been thoroughly tested here, and found to be contra indicated.

MEDICAL PROGRESS.

Helenol.—Helenol is one of the active principles contained in the root of *Enula campana* or *Inula helenium*, the more common name of which is elecampane.

The decoction of elecampane has been recommended as an antidartrous remedy by Knakstedt, and as antipsoric by Hufeland and Guibout. M. Paul Blocq has recently made some experiments as to the antifermentative properties of helenol. [The active principles of elecampane are alantol and helenin. Helenol is probably written here for helenin.] His experiments were based upon those of Korab, which showed that this substance possessed valuable antiseptic properties. Though the experiments of M. Blocq are too few upon which to base general conclusions, yet his results have been very satisfactory in simple and recent traumatisms, in wounds of inflammatory origin, in callous and indolent ulcers, in dressing amputations, and in other cases requiring antiseptic dressings. This substance is a colorless liquid, of slightly aromatic odor. It is not irritating when used as a dressing, and its agreeable odor is a decided advantage in its favor.—*Progrès Méd.*, Nov. 17, 1883.

SYPHILITIC NEURALGIA.—PROF. SEELIGMUELLER read a paper on this subject at the Fifty-sixth Versammlung Deutscher Naturforscher which recently met in Freiberg.

Neuralgiæ, he said, which are certainly related, etiologically, to constitutional syphilis, are nothing like so uncommon as would be supposed on reference to the literature of the subject. He does not refer, of course, to the cases of neuralgia following syphilitic periostitis, or to the osseous pains, but only to such cases in which the pains occur along the tracks of nerves. Such cases have been observed by Fournier in the course of the supraorbital and sciatic nerves. Seeligmüller has also observed them in the course of other nerves, as the intercostals, the brachial plexus, and the great occipital.

Lately he has observed, it seems, a very typical localization of syphilitic neuralgia in the head, and certainly along nerve tracts, which were formerly supposed to be cases of isolated neuralgic affections in unusual places. In these cases the pains were spontaneous, as though pressure had been made along a track two or three fingers wide, and which extended on both sides from the ear upward to the top of the head. He has further seen cases in which the pains were confined to a limited zone and to the course of sensitive nerves, as the auriculo-temporal and small occipital. There was no middle-ear disease in any of the cases.

The time at which the neuralgic affection comes on after syphilitic infection varies from two to fifteen years. The treatment is, of course, antisyphilitic.—*Deutsche med. Wochenschr.*, October 24, 1883.

CICATRICIAL STENOSIS OF THE PYLORUS WITH DILATATION AND TETANUS.—M. DUJARDIN-BEAUMETZ reported this case at the meeting of the Société des Hôpitaux, on October 26th. The patient presented on his entrance into the hospital, the symptoms and physical signs of enormous dilatation of the stomach, with pyloric stenosis. The enormous size of the stomach was easily appreciated by the ordinary methods of physical diagnosis. Uncontrollable vomiting gave evidence of the state of the pyloric orifice. Washing out the stomach gave such relief that the patient was able to leave the hospital, but returned in a short time with an obstinate diarrhœa, produced by taking proprietary pills.

After entering the hospital the second time, he had tetanic seizures, such as have already been described by Kussmaul, as occurring in cases in which washing out the stomach is resorted to, and of which there have been many cases of late years. The tetanus, instead of being limited to the limbs, as is usually the case, became generalized, and the patient succumbed to asphyxia produced by spasmodic contraction of the diaphragm.

During life there had been diagnosticated a cicatricial contraction of the pylorus, due to a round ulcer of the duodenum or pylorus. At the autopsy the stomach was found distended with water and invading the whole abdominal cavity. In the duodenum, just beyond the pyloric orifice, there was a stricture, beside the one involving the pylorus. The orifice was so small that a quill could scarcely be passed. M. Dujardin-Beaumetz thought that under these circumstances extirpation of the pylorus offered the best chance for the patient's life. This opinion was concurred in by MM. DÉBOVE and MILLARD.—*Gaz. Méd. de Paris*, November 3, 1883.

THE USE OF CORROSIVE SUBLIMATE AS A DISINFECTANT IN OBSTETRICS.—At the Fifty-sixth Deutschen Naturforscher Versammlung, in September, 1883, DR. KEHRER, of Heidelberg, read a paper on this subject.

Since April, 1882, he has used corrosive sublimate in two hundred and twenty-one labors. In four only was there an urticarious eruption, beginning on the thigh and extending over the whole body. This disappeared in three or four days. Attacks of stomatitis occurred in one lying-in woman and in three gynecological cases; the first having previously undergone a process of inunction, and two of the last had been taking mercury. Kehrer first used corrosive sublimate solutions of 1 to 2000; lately, of 1 to 1400. During labor he makes a vaginal irrigation before making the vaginal examination. As to the results of corrosive sublimate disinfection in the lying-in state, he states that two-thirds of the women remain entirely free of fever. Before the use of the sublimate two-thirds of them had febrile actions.

KUESTNER, in discussing this paper, was strongly in favor of the sublimate disinfection as a means of thorough disinfection. He has found that, after carbolic irrigation of the uterus, the cocci did not disappear, but their disappearance was very prompt after the sublimate irrigation.—*Centralbl. f. Gynäkol.*, Nov. 3, 1883.

HYSTERECTOMY IN PREGNANCY.—PROF. KARL BRAUN VON FERNWALD read a paper on this subject at the meeting of the k. k. Gesellsch. der Aerzte in Wien, on October 19th. He reported five cases in which he had performed Cæsarean section by Porro's method, on account of the absolute indications of very narrow rachitic and osteomalacic pelves. At present the women were all doing well. One, a case of severe osteomalacia was so much improved as to be able to assist in the ward-work. His statistics of the Cæsarean section with hysterectomy and castration during six years, are twelve cases: Recovered, seven; partially favorable consequence in one case; and bad results in four cases. Of the twelve children, eleven are living. The general mortality as regards the women, is 33.3 per cent.

The extra-peritoneal method of treating the stump was employed in eleven cases, with bad results in three cases; mortality, 27.27 per cent. The three deaths were due to peritonitis within from two to four days. The stump was dropped in one case, with a fatal result.

Prof. Braun recommended the Porro operation with the extra-peritoneal treatment of the stump, and altogether rejects dropping the stump in these cases, as well as the return to the old operation with the new uterus suture of Sänger and Leopold. He finally recommended the following modifications for Cæsarean section with amputation of the uterus, castration, extra-peritoneal treatment of the stump.

1. Early operation at the end of pregnancy, before the beginning of labor, as the most proper time.
2. Antiseptic prophylaxis with 5 per cent. carbolic acid water before, and thymol water (1 to 1000) during the operation; anæsthesia with the alcohol-chloroform-ether mixture.
3. After the abdominal incision has been made the uterus should be drawn out, and an elastic loop thrown around the cervix, before the incision into the uterus is made.
4. A high elastic permanent ligature just above the cervix, and over that a strong Billroth's écraseur chain before the amputation of the uterus. Cauterization of the stump.
5. Closure of the abdominal wound with a metallic-plate and silver-wire suture, and with carbolized catgut. Fixing of the stump by means of a diagonally placed lance needle, and bringing together the peritoneal walls.
6. Cleaning and dusting of the wound with iodoform and the use of the Lister iodoform-gauze and wadding dressing.—*Wien. Med.-Presse*, October 28, 1883.

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THE VAGINAL EXTIRPATION OF THE CANCEROUS UTERUS.

Extirpation of the cancerous uterus is an operation which belonged almost exclusively to the first third of the century until within the last few years. Langenbeck, in 1818, seems to have been the first, or among the first, to remove successfully a prolapsed cancerous uterus; but he was less fortunate in his removal of the uterus by the abdominal method, laparo-hysterectomy, an operation proposed by Gutberlat in 1813, and performed in 1825. The vaginal method seems to have been much oftener preferred. The undisplaced uterus affected with cancer, was successfully removed by Sauter, of Constance, in February, 1822. Blundell, who operated in four cases, had his first and only successful case, in February, 1828. Récamier was the first to do the operation in France, in 1829. Among other operators were Roux, Siebold, Delpech, Lizars, and Dubled.

The operation was abandoned, and its great mortality very well explains the abandonment. Duparcque, writing in 1839, *Maladies de la Matrice*, observes that of forty cases in which this operation has been done, there was one partial success, and there were two complete successes; Marjolin stated in 1846, *Dictionnaire de Médecine*, that nine-tenths of the patients died within a few days, and the rest were only apparently cured, surviving but a year.

There are some striking contrasts between the operation as first and as now done. One of these is that to day anæsthesia saves the patient from suffering, and greatly facilitates the operation; it required great heroism on the part of the operator, and still greater on the part of the patient, in the day when anæsthetics were unknown. Again, most of the first operators were indifferent as to the loss of blood, no hæmostatic means being used: hence we read in the history of the old operations that one patient lost a pound and a half, another nearly two pounds of blood, collapse following the operation, which often proved fatal in twenty-four hours. Récamier indeed tied the lower third of each broad ligament, thus securing the uterine arteries, but this does not seem to have been the general practice. Another contrast is in the rapidity with which the operation was done; in many of the cases only thirty minutes or so were required, though Blundell was an hour doing his first operation, but now twice or thrice thirty minutes may be necessary.

Schroeder, at the last meeting of the British Medical Association, gave an account of his method of operating, that which is generally followed. Two volsella are applied to the uterine lips, and the uterus drawn down as far as possible; next a circular incision is made in the healthy tissue about the cervix, and the vaginal mucous membrane pushed back and upwards as far as possible; then the retro-uterine pouch is opened, and the uterus retroverted so as to bring its fundus into this opening; after this the uterus is separated from its anterior attachments, and then the broad ligaments are ligated, sometimes a single ligature answers for each, at others several ligatures are used, the ligaments being tied in several parts; the ligaments are then divided close to the uterus, and the organ removed. The stumps of the ligaments are drawn into the peritoneal wound, one on each side, and a T-shaped drainage-tube inserted. He observes that the chief danger is from the slipping of the ligatures. He also states that the technical part of the operation is not easy, and the operator ought to be accustomed to using a knife and to applying ligatures in the depth of the vagina. The sutures, for he closes the peritoneal wound, are removed on the fourteenth day.

Schroeder states that the operation is very difficult if the vagina is narrow, not easy in nulliparæ, often impossible in old women. These difficulties did not deter the earlier operators; they did not hesitate to enlarge by incisions the vaginal entrance. Lizars, for example, split the perineum so that the vagina and the rectum were converted into a common canal.

Olshausen guards against slipping of the ligature which is applied to the broad ligament, by using an elastic thread carried by means of a bent aneurism needle. Is it not possible that a Bellocq's canula might be used for placing the ligature?

Rydygier ties the uterine artery before dividing it.

Mueller, in the *Centralblatt für Gynäkologie*, 1882, suggested that the uterus should be first split vertically, dividing it into symmetrical halves, when the ligation of each broad ligament could be readily done, while the hemorrhage from the incision might be perfectly controlled by compression and torsion. So far as we know, this suggestion has not been tried.

Fritsch, in a recent paper in the same journal, very fully presents his method of operating: the salient points in this method we give our readers.

The first cutting is done at the side of the uterus; vessels that bleed are immediately tied, and the author states that he has sometimes applied twenty ligatures to one side of the uterus; the tissues are always to be cut, never torn; as soon as one side is separated and all hemorrhage stopped, the other side is to be similarly treated, only after incising the vagina let the incision be carried anteriorly and posteriorly so that the cervix is completely circumscribed, and into the sulcus thus formed place an elastic ligature which prevents all bleeding from the cancer; next the operator separates the uterus from the bladder; the uterus is now drawn downward, but not retroverted, and ligatures applied to the oviducts and round ligaments, sometimes three or four ligatures being used on each side, and so applied that the under ligature always includes a portion of the tissue embraced by the upper one; if the ovaries and oviducts are prolapsed they are removed, otherwise they are not disturbed. The uterus is now removed, and the opening immediately filled with a sponge the size of the fist; upon its removal the ligatures are drawn down to expose to view the cut surfaces, new ligatures are applied to bleeding points, the entire part covered with iodoform, the lower peritoneal cavity cleansed with iodoform gauze, and the vagina also thus cleansed; when there is hemorrhage from the connective tissue between the peritoneum and vagina, the two latter are stitched together; an iodoform tampon is placed in the vagina. The novelty of the method consists, according to Fritsch, in the lateral incisions, the elastic ligature of the cervix, and in drawing the uterus forward instead of retroverting it in its removal. So far as not turning the uterus backward, but drawing it forward is concerned, Fritsch states that Kraussold did it first, and therefore priority is due him.

We merely add that in the account of one of Récamier's cases of extirpation of the uterus, in January, 1830, anteversion, not retroversion, of the uterus was done in the operation, and that Gendrin, in the *Journal Générale de Médecine*, October, 1829, expressly advises that the operation be begun at the sides of the uterus so as to reach the broad ligaments, and thus be able to control the hemorrhage.

JEQUIRITY.

We have already called the attention of our readers to the remarkable properties of jequirity. The observations of MM. Cornil and Berlioz, which we have quoted, have been resumed, and new facts have been developed. Before speaking of the new points, it may be well to give an account of the knowledge already existing of the peculiar powers of this agent.

It has been proved that the active constituent of jequirity is a microbe—a minute organism—and that if freed by proper filtration from these bodies, the infusion no longer possesses the power to excite inflammation. This disease-producing microbe is derived from the atmosphere, as Sattler has demonstrated. The infusion is prepared by macerating one part of the finely pulverized seeds, in seven hundred and sixty parts of cold distilled water, which, after digesting twenty-four hours, is then filtered and placed in flasks, so closed as to prevent the admission of the germs of putrefaction. Thus prepared, the infusion will retain its activity for several weeks. The germs derived from the air find in the albuminous matter of the seeds the material suited to their pullulation—in other words, the infusion of jequirity is a "culture fluid." A few drops placed in contact with the conjunctiva excite an active inflammation which may supplant an existing morbid process. It has been shown to cure pannus, trachoma, and other affections by this "substitutive inflammation" produced by the action of the microbe. An aerial disease-producing microbe has thus been proved to exist. The agency of aerial minute organisms in the causation of fermentative and other morbid changes, as maintained by Pasteur, is therefore confirmed.

The recent observations of MM. Cornil and Berlioz add new facts equally convincing of the substantial accuracy of Pasteur's doctrines, and of the important generalizations based on them. By subcutaneous injection of the infusion of jequirity, in frogs, rabbits, and guinea pigs, they have produced phlegmons of the skin which were followed by suppuration and gangrene. They find that if the animal survive these lesions, a second and greatly stronger injection produces no result, and, hence, they conclude that the first operation has the effect of a vaccination. They further ascertained that by injecting into the pleural or peritoneal cavity of a rabbit, even the fourth of a drop of the infusion, peritonitis or pleuritis followed, and the microbes were diffused throughout the circulation. The injection of this small quantity into any part of a frog, was followed by general septic infection, millions of the microbes being produced, and they were found in all organs and tissues, except the cornea. A drop of the blood of such an infected frog caused in another frog the same septic infection and the same generalization of the microbe. If, instead of injecting the infusion, the grains of jequirity are mixed in and taken with the food, systemic infection does not occur. The elimination of the microbe from the system takes place by the kidneys and the intestinal mucous membrane.

THE PRESENCE OF BACILLI IN SURGICAL AFFECTIONS OF TUBERCULAR OR SCROFULOUS ORIGIN.

During the current year, as we learn from the *Fortschritte der Medicin*, Nos. 9 and 17, the *Journal de l'Anatomie*, No. 4, and the *Revue de Chirurgie*, No. 11, Schuchardt and Krause, Schlegtendal, Cornil and Babes, and Bouilly have made numerous researches which demonstrate the presence of the bacillus tuberculosis in certain affections that were manifestly tubercular, or were suspected to be of that nature. Of the lesions, the most frequent were cold abscesses, strumous synovitis, and tubercle of the bones, lymphatic glands, and the skin. The cases examined included also at least two of fungous synovitis of the sheaths of the tendons, and one each of tubercle of a muscle, of the tongue, of the epididymis, of the testicle, and of the female genital organs.

In all of the minute examinations, with the exception of those of Schlegtendal, bacilli were discovered; but in the majority they were so few and so difficult of detection that as many as three in the interior or vicinity of a giant cell were quite uncommon. In the case, indeed, of a cold abscess of the thigh, at least twenty sections of the limiting membrane were required to discover two of the organisms, and in only one example out of the forty recorded by Schuchardt and Krause were ten met with on the first section.

From their rarity and the difficulty of their detection, erroneous conclusions may be drawn as to the true nature of the lesions. More than this, their number does not correspond with the gravity of the affection. This point is well illustrated by one of the cases of Bouilly, in which, despite the fact of extensive tubercular deposits in various organs and tissues, only two bacilli were found in a presternal cold abscess. It should, however, be remarked that these organisms may be detected in the pyogenic membrane when their presence cannot be shown in the pus of a tubercular abscess. Their association with fungous synovitis proves, moreover, the tubercular nature of that affection, a fact which had been surmised by Trélat, Terrier, and other observers.

The investigations of Schlegtendal were confined entirely to opened and closed collections of pus in the bones, joints, glands, and soft tissues. Of the 100 cases, which included 520 preparations, 26 were attended with positive and 74 with negative results. Of 40 examples of unopened abscess, bacilli were found in 17, while of 60 examples of fistules and ulcers, they were present in only 9. In these statistics are included, however, some cases which certainly have nothing in common with tubercle, as, for example, 1 of abscess from caries of a tooth, and 3 of chronic ulcer of the leg. The examinations, moreover, appear to have been hastily conducted, since in at least one-half of the negative results only two preparations were inspected.

The latter objection becomes the more serious when it is remembered that a negative result is only declared after at least four examinations of the sputum of phthisis pulmonalis, in which bacilli are far more abundant than in pus. Had more frequent examinations been made, particularly in the cases in which there were also tubercular lesions of the lungs and other organs, it is highly probable that the positive results would have been materially increased in number.

The absence of bacilli from pus appears to support the view that tubercle alone does not cause suppuration, but that the pus found in the immediate vicinity of tubercular deposits is due to some other factor. Hence their presence is merely accidental, and denotes possibly the breaking down of tubercular tissue and its diffusion in the purulent collection.

SCHEDE'S OR LORETA'S OPERATION?

In The Medical News, of April 21, 1883, Dr. R. P. Harris gives an account of four cases of digital divulsion of the pylorus for cicatricial or carcinomatous stenosis, by Professor Loreta. The first case was one of cicatricial obstruction, following ulceration, in which, on September 14, 1882, the stomach was opened, after having been liberated from its attachments, and the stricture divulsed with the fingers. The gastric and abdominal wounds were then closed; the man made a rapid recovery, and experienced no trouble five months subsequently.

In looking over vol. vi., 1877, of the *Verhandlungen der deutschen Gesellschaft für Chirurgie*, we accidentally discovered that Schede, of Berlin, had anticipated Loreta by seven years. At p. 107, he describes a case of attempted suicide by swallowing sulphuric acid, which resulted in strictures of the cardiac extremity of the œsophagus and of the pylorus. He established a gastric fistule, with a view to gradually rendering both orifices permeable by bougies, and actually passed an instrument through the pylorus. The patient, however, expired in fifty-eight hours, and his object was defeated.

The only difference between the two operations consists in the fact that Schede intended to dilate the stricture gradually, while Loreta practised rapid dilatation or divulsion. The credit of the feasibility of rendering a strictured pylorus permeable by opening the stomach, therefore, must be awarded to the German surgeon.

THE TREATMENT OF CICATRICIAL STRICTURE OF THE ŒSOPHAGUS THROUGH A FISTULE OF THE STOMACH.

IN the preceding article it has been shown that Schede conceived the idea of dilating cicatricial strictures of the pylorus and of the cardiac extremity of the gullet through an artificial opening in the stomach; and we find that at a subsequent meeting of German surgeons, Trendelenburg, in reporting the case of a boy, eight years of age, in which he had done gastrotomy for cicatricial stricture, stated that he had failed in his attempts to overcome the œsophageal obstruction through the new route.

In the *Deutsche medicinische Wochenschrift* of October 24, 1883, Von Bergmann records the case of a man who suffered from fibrous stricture of the cardiac extremity of the œsophagus, the result of drinking lye, in which the operation was successfully performed. The stomach was opened on the 29th of January, and a large fistule established. At the expiration of one month, attempts were made to reach the cardia with the fingers, at the same time that a probang was passed by the mouth, and, after several failures, a thick band of tissue could be distinctly felt between the probang and the finger. With the aid of an instrument constructed especially for the purpose, through the branches of which firm pressure was made from the œsophagus and from the stomach upon the band, the latter finally sloughed, and the opening thus made was plugged with a bit of compressed sponge, armed with a strong thread for the purpose of withdrawal. After its removal, a bougie, thirty millimetres, or one inch and one-fifth, in circumference, was passed into the stomach through the mouth. The bougie was used several times a day, and the sponge every other day until April 25, when the normal size of the gullet was reëstablished. The dilatation was, however, continued until the middle of May, when a sound, twenty-five millimetres, or one inch, in diameter, could be passed with ease. The introduction of the instrument was now entrusted to the patient himself, and Von Bergmann closed the fistule on the 21st of May. The man continued the use of the large bougie daily, and when he was exhibited at the meeting, on the 10th of October, his condition was all that could be desired, a cure having practically resulted.

In a clinical note contained in the *Gazetta degli Ospitali*, for November 14th, may be found a brief account of two cases of successful instrumental divulsion of cicatricial stricture of the lower third of the œsophagus, by Loreta. The stomach having been opened, the divulsor was passed through the cardia into the stricture, the latter was expanded to what was considered to be a sufficient extent to admit of the passage of food, and the incisions in the stomach and abdominal wall were closed with sutures. The subsequent condition of the subjects was most satisfactory.

The first of these operations was performed on the 24th of October, or nine months after that of Von Bergmann, and several years after the proposition of Schede and the actual attempt of Trendelenburg. Despite these facts, however, the credit of attacking a stricture of the œsophagus through the stomach is awarded to Loreta, and no notice whatever is taken of the operations of his German *confrères.*

NERVOUS ACCIDENTS CAUSED BY THE MATERIALS OF PHOTOGRAPHY.

DR. NAPIAS (*Gazette Médicale de Paris*, No. 40, 1883) has already given an account of an amblyopia and a form of professional cramp similar to writer's cramp, which happen to those engaged in the preparation of photographic plates. These observations have been confirmed by MM. Duchesne and Meichel, who have also furnished new facts. It may be of interest to the large number of those engaged in the business of photography, as well as to amateurs, many of whom are physicians, to learn the nature of the dangers to which they are exposed in the pursuit of this mode of bread-winning, or of pleasure-getting.

There may occur poisoning by the vapor of hydrocyanic acid, which is formed by the decomposition of cyanide of potassium by bichromate of potassium. Nervous phenomena may result from the breathing of an atmosphere in a dark room without oxygen, this necessary element being taken up by pyrogallic acid when in contact with the alkali, ammonia. If to this loss of oxygen be added the vapor of ammonia, it is not surprising that such an atmosphere must, if long breathed, damage the blood, and cause a more or less profound anæmia with its attendant symptoms.

In the preparation of the plates by the gelatine bromide of silver process, every ray of light must be excluded, and the operator pursue his work by the aid of a feeble illumination afforded by the red-ray lantern. Besides the foul air thus caused, the narrow and gloomy apartment is filled with the vapor of ether. Unless great care in the ventilation is practised, the necessary detention in the dark-room proves very hurtful.

REVIEWS.

La Longévité et les Moyens de l'acquérir. Par Joseph G. Richardson, Professeur d'Hygiène a l'Université de Pensylvanie, associé etranger de la Société d'hygiène Française, traduit de l'Anglais, avec l'autorisation de l'auteur, par P. Barrué. 8vo., pp. 180. Paris: Asselin et Cie, 1884.

Long Life, and How to Reach It. By Dr. J. G. Richardson, etc.

Some time ago our British cousins showed their appreciation of what is known as the "Health Primer Series" by republishing it in England, with the names of the authors carefully omitted from each book, and every evidence that it was not the product of British intelligence suppressed. To this compliment has now been added the more acceptable one of a French translation and publication of Dr. Richardson's member of this series, entitled, "Long Life, and How to Reach It," with due credit to the author.

The views expressed in this book do not need to be dwelt upon here, for they were reviewed when they appeared in their original form. One point may, however, be referred to. This relates to a subject which just now is seasonable, namely, the question of protection against catching cold, as influenced by the clothing.

This is sensibly discussed by our author; but one thing which has struck the reviewer is not mentioned. This is that the custom of wearing thick undershirts in winter, while it keeps the body warm enough out of doors, keeps it much too warm when in the house. The consequence is that indoors, with the thermometer at a summer height, one is unable to suit the clothing to the conditions, without so extensive an act of undressing as no one can go through. The most proper plan would, in our opinion, be—and it accords with successful personal practice—to wear only moderately thick undershirts, and make the necessary addition in the shape of coats and overcoats on going out. In this way the body need not be overheated in the house, and it can be made warm enough in a moment for going out of doors. The great thing in this plan is to see that the forearm is not exposed by having the sleeves of the undergarment so short that chilling may take place at this place.

A System of Human Anatomy, including its Medical and Surgical Relations. By Harrison Allen, M.D. Section V., Nervous System. 4to. pp. iv., 459 to 583. Philadelphia: Henry C. Lea's Son & Co., 1883.

With one more part Dr. Allen's fine work will be completed. The present one deals with the entire nervous system, and is very satisfactory. He records briefly but clearly the usual anatomical arrangements of the particular parts, next their variations, and then follows that which distinguishes this from all other anatomical text books—practical remarks on the medical and surgical relations, the diseases and accidents peculiar to each part. Generally these remarks are very useful from the clinical point of view. They add greatly to the interest of the book, and aid the practitioner in his every-day work. Copious references to the original sources are given, thus doubling their value. We are somewhat surprised, however, to see no reference to the operations of nerve-stretching, especially in connection with the great sciatic nerve.

In the description of the brain, we are glad to see the numerous drawings of sections at various levels. These aid one greatly in getting an exact idea of the internal and varying relations of any given part of the brain, and, in fact, are indispensable in the modern more exact descriptions of the brain both anatomically and pathologically.

The local student in Philadelphia can well supplement these plates of sections by a study of the splendid series of mounted sections by Schmidt, in the Mütter Museum of the Philadelphia College of Physicians.

The text is in general clear, brief, and sufficiently minute, and usually very accurate. In Fig. 92, p. 469, it is correctly stated that no central canal exists in the *filum terminale*, so that we were surprised to learn, on p. 465, that in this part of the cord it was T-shaped, or cordiform. In fact, it is a misfortune that this canal is called the canal of Stilling, or the central canal. Its best name, by far, is the "ventricle of the cord," for it is precisely analogous to the ventricles of the brain in its development.

Another slip we observe on p. 510, where the falx cerebelli is misprinted cerebral falx; and on p. 527 Vanzetti's name has the z omitted.

The plates in general are very good, though we observe some inaccuracies, chiefly in spelling. Thus, in Pl. 83, Fig. 5, "cervical" is misdrawn as "cercival." In Pl. 85, Fig. 1, the facial nerve is called the "fascial." In Pl. 86, Fig. 2, the flexors of the forearm are styled "flexors of foramen;" and in the description of Fig. 113, "i. c.," the internal capsule, is designated "i. e," which is very apt to mislead. In Pl 86, Fig. 1, at the bottom the median nerve is labelled as the ulnar artery by error. In the same figure, on a curiously shaded deltoid muscle, runs an unlabelled, and surely an impossible, nerve.

We have pointed out these few errors for future correction; but while they mar the complete accuracy of the work, they are but trifling blemishes, which but act as foils to the many and marked virtues and excellences of the entire book. None of us escape errors, but many do, unhappily, escape the merits of the present author. The work is a monument of careful, patient, long-continuing toil, well rewarded in its valuable results.

SOCIETY PROCEEDINGS.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, Thursday, December 6, 1883.

The President, Fordyce Barker, M.D., LL.D., in the Chair.

NOMINATION OF OFFICERS.

After the reading of the minutes, the nomination of officers was made, as follows:

For *Vice-President*, Drs. Weir and H. D. Noyes.

Trustee, Drs. Purple and C. R. Agnew.

Treasurer, Drs. Cushman and E. R. Peaslee.

Treasurer of the Board of Trustees, Drs. J. H. Hinton, D. B. St. John Roosa, and F. A. Castle.

Committee on Admissions, Drs. James and Daniel Lewis.

Committee on Education, Drs. W. G. Wylie and John Shrady.

Committee on Ethics, Drs. C. D. Varley and F. V. White.

Committee on Library, Drs. A. Jacobi and H. D. Nicoll.

REPORTS.

After a report from the Committee on Admissions, a number of new Fellows, elected at the last meeting of the Academy, were presented with diplomas and copies of the Constitution and By-laws by the President.

Dr. Alexander Hunter, Secretary of the Section on Obstetrics, announced that at the last meeting of the Section Dr. W. M. Chamberlain had presented a paper entitled, "Notes on Displacements of the Uterus."

A COMMUNICATION FROM THE COUNCIL

was then read, recommending the appropriation of $2000 for the use of the Library Committee during the ensuing year, and that a tax of three dollars, in addition to the regular dues, should be levied upon each Fellow for one year, in order to place the Academy on a sound financial basis. On motion of Dr. E. D. Hudson, the recommendations of the Council were adopted.

PROF. T. GAILLARD THOMAS then read a paper on

THE PREVENTION AND TREATMENT OF PUERPERAL SEPTICÆMIA.

At the present day, he said, when medical literature had assumed such enormous proportions, every scientific paper ought to be challenged for its *raison d'être*, and he did not hesitate to accept the challenge in regard to the essay which he was about to present to the Academy. He would freely confess, at the outset, that it contained nothing original, and that it was devoted to a subject which had received for a considerable time the careful attention of the progressive obstetricians of the world. Nevertheless, he ventured to hope that the lessons which he desired to inculcate might be productive of some good, and be of practical benefit to the profession. In support of the fact that the subject was not yet as well understood as it ought to be, he would mention two points: When at the meeting of the American Gynecological Association at Baltimore, in 1878, he advocated the use of intra-uterine injections in puerperal septicæmia, there was but one gentleman present who agreed with him: again, about one year ago he read the history of a case of this disease, treated in the manner presently to be described, at a meeting of the New York Obstetrical Society. This was published in some of the medical journals, and very soon afterwards he received at least half a dozen letters from practitioners in various parts of the country inquiring more particularly into the details of the method of treatment adopted. Finally, he said, he was, if not the first, among the very first to adopt the use of intra-uterine injections and external refrigeration in the treatment of puerperal septicæmia, and as a teacher and a consultant, who had had a very large experience in the matter, he felt entitled to speak.

In the last quarter of a century, he continued, more advance had been made in the study of the febrile conditions incident to the puerperal period than in all the preceding ages. It was true that long before this the communicability of puerperal disease was recognized, but it was reserved for the development of the germ theory to throw new light upon the subject. Ever since the time of Hippocrates, more than two thousand years ago, the profession had been striving to master the problem presented by such affections, and it was only now that it was beginning to find its way out of the darkness in which it had hitherto labored. We were now beginning to understand something of the nature of puerperal disease. Having given Hervieux's classification, he went on to describe the condition of the blood, with its marked excess of fibrin, and the exalted excitability of the nervous system in the parturient woman, the consequences which were likely to result from these factors; after which he spoke of the rapid physiological hypertrophy undergone by the uterus and other organs during gestation. He then described the appearances which would be presented by the genital organs of a woman dying forty-eight hours after delivery. Among the conditions noted would be found two or three small rents in the cervix uteri, which would be swollen and œdematous; while in the vagina would probably be found several superficial ruptures of the mucous membrane. About the vulva, also, would be found lesions of continuity. The fourchette would be torn through and at least one or two small rents in the mucous membrane covering the ostium vaginæ would be seen. From the fact that the ichorous and irritating fluid coming from the interior of the uterus was constantly flowing over these various lesions, we would naturally expect to find that infection and its dangerous consequences in the form of lymphangitis, phlebitis, peritonitis, or other inflammatory affection, would result. Yet these conditions existed in the case of every puerperal woman, and the ordinary result was complete and satisfactory recovery, unless some unusual event occurred to interrupt the physiological process going on. There were a number of recent wounds constantly bathed with a fluid made up of decaying animal tissue, and a bad result would naturally be anticipated; yet, according to the latest statistics of Tarnier, only one woman out of a hundred died in the lying-in hospitals. In fact, death was the very rare exception.

Occasionally, however, the ordinary course of progress towards recovery was interrupted, and striking, alarming, and often fatal phenomena suddenly presented themselves. On the morning of the third day after delivery, it might be that the physician would leave his patient in a perfectly natural condition, and on returning in the evening would find that she had had a chill of greater or less severity, that the lochia had ceased, that she was suffering from great general distress, and more or less pain in the head, back, and pelvic region; while the pulse had gone up to 130 or 140, and the temperature to 104°. All this would indicate that a dangerous poison had reached the genital tract, though the physician might flatter himself it was only an attack of malaria or milk-fever. Within a week we should find that parenchymatous metritis, lymphangitis, phlebitis, peritonitis, endocarditis, pneumonitis, pleuritis, or other form of septic inflammation had become fully developed, and the patient would probably die from continued high temperature and exhaustion.

In regard to the pathology of the disease, he believed that puerperal fever, in whatever form it might show itself, was puerperal septicæmia: the cause of the affection being the absorption of a poison by a solution of continuity in the genital tract. In 1871 Hervieux had said: "Here I stand. . . . . I believe in the multiplicity of puerperal diseases. I believe in their origin from puerperal poison." This aphorism he accepted as expressing his own views. The special committee of the Berlin Obstetrical Society, composed of the most distinguished names, with Schröder at its head, which was appointed to investigate and report upon the subject of puerperal fever, had expressed the same tenets, and Dr. Thomas here quoted at length from the report of the committee. As to nomenclature, he thought the word "metria," recently proposed by the Dublin School of Obstetrics, was even more objectionable than the old term puerperal fever; while, on the other hand, puerperal septicæmia conveyed a clear and definite idea of the origin and nature of that affection. He thought that in spite of the fact that complications were of such frequent occurrence, the septic element was so paramount that the term should be adopted. Barnes had recommended the same, although he had adopted it with the proviso that it did not indicate a distinct and specific poison. He himself, however, believed that there was a specific poison.

What, then, was the nature of this poison? How did it originate? What encouraged its life, and what crippled its activity? Unfortunately, in the present state of our knowledge, these questions could not be definitely answered; but the same was true in regard to the germ of scarlatina, variola, and many other zymotic diseases. Many German authorities had insisted on the agency of micrococci in the production of the disease; but the opinions regarding them are as yet too unsettled to permit of a decision in the matter. Many investigations, however, were at present being pursued in the laboratories of Germany and France, and there was a fair prospect of success in the solution of the problem. But, although we did not know the exact nature of the poison, there could be no doubt that such a poison did exist, and that there were only two methods by which it could be introduced into the system. These were, first, through the atmosphere, and, secondly, by the contact of the hands of the physician or nurse, or of clothing or bed-covering with the genital tract.

While in lying-in hospitals positive rules were always adopted for the management of all cases, in private obstetric practice there was, as a rule, a laxity of caution which bordered closely on criminality. Prophylaxis was, however. the plain duty of every practitioner, and the following rules ought to be carried out in every case of confinement:

First. The room should be cleared of all upholstery, as far as possible, and the floor, walls, ceiling, and every article of furniture sprinkled with a ten per cent. solution of carbolic acid, or a solution of bichloride of mercury of the strength one part to a thousand of water.

Second. The nurse and accoucheur should be scrupulously clean about their persons, and use upon their hands and clothing some antiseptic wash, especially if within the past fortnight they have been exposed to the contagion of scarlatina or other septic influence. The disinfectant preferred was a saturated solution of boracic acid,

Third. As soon as labor begins, the nurse, having cleansed her hands thoroughly with a stiff nail-brush, should make a warm antiseptic vaginal injection, and repeat it every four hours, in the mean while keeping a cloth over the vagina.

Fourth. Both the physician and nurse should use upon their hands and upon every instrument or utensil employed during the labor a solution of bichloride of mercury (1 to 1000).

Fifth. The third stage of labor should be efficiently produced, and ergot should be immediately administered, and afterwards kept up in moderate doses three times a day for at least a week.

Sixth. The physician should take nothing for granted on the nurse's assertion, but, at the end of labor, should make an examination of the genitals. If rupture of the perineum is found, it should be united at once by suture. If a slight abrasion is discovered, the parts should be cleansed with a linen cloth, and persulphate of iron and carbolic acid applied, after which the parts should again be dried with a cloth, and painted with gutta-percha collodion.

Seventh. In six or eight hours, a suppository of cocoa butter, containing from three to five grains of iodoform, should be placed under the os uteri. This should be repeated every two or three hours for at least ten days.

Eighth. In ordinary cases, vaginal injections of a solution of bichloride of mercury or other disinfectant should be made every eight hours with a syringe throwing an intermittent stream.

Ninth. When catheterization is necessary, use a new gum-elastic instrument, first dipping it in an antiseptic solution. Nurses should never be allowed to use the old silver catheters which they are sometimes in the habit of keeping about them.

Tenth. Last, but not least, let the physician convince himself practically of the nurse's ability to use the syringe and catheter, and to insert suppositories properly.

Even if all the above suggestions were carefully carried out, the trouble of the plan would not be great, and the accoucheur would be amply repaid by the satisfaction of having performed his duty. In the case of a fatal result, this would be a source of unspeakable comfort to him. It was clear that the observance of such rules as these would do much to increase the importance of parturition in the eyes of the profession; so that a woman about to bring forth would come to be regarded in the light of a patient who was to undergo a capital operation. Having again quoted the report of the Berlin Obstetrical Society in support of his views, he went on to say that he wished to record in the strongest language his protest against the use of intra-uterine injections as a prophylactic, except after very severe operations within the uterus which rendered the occurrence of septicæmia almost certain. It was a dangerous method, which was only justifiable as a means of treatment in the presence of a still greater danger.

In spite of every measure taken to prevent it, septic disease sometimes occurred. The poison might not be a necessarily specific one. It was probably the same as that giving rise to septicæmia after gunshot wounds. It was, he believed, however, entirely different from the kind of infection arising from an adherent placenta or a retained mass of blood. It was capable of causing the true, specific lymphangitis, and in many country neighborhoods it was entirely unknown. Out of three thousand cases, Hervieux had had but one case of puerperal septicæmia. As soon as the patient is stricken with the poison, marked phenomena present themselves; after a chill, high temperature and quickened pulse follow. The fever was accompanied by headache and pain in the back, and sometimes by nausea and vomiting. At the beginning, the physician could form no idea of what course the disease might pursue; but if the precious moments at the outset were passed in inactivity, an advantage would be lost which could never be regained. Whatever form the disease might ultimately take, whether cellulitis, phlebitis, peritonitis, or other variety of trouble, he could strike at the root by taking prompt action. In the case to be supposed, it was assumed that the attack was a violent one, and that the patient's friends were possessed of ample means. The method of treatment recommended was as follows:

First. As soon as it becomes probable that puerperal septicæmia is setting in, a hypodermic injection of Magendie's solution of morphia should be given (unless there is some special and strong contraindication), to allay pain and nervous irritability. Afterwards, this should be repeated every six or eight hours, as a rule. In Dr. Thomas's experience, no method of administering opium compared with this in efficiency. If a new hypodermic needle, first washed with soap and water, and then dipped in a solution of bichloride of mercury, was employed, there would be no danger of causing abscesses. It was the old, rusty needle which did this.

Second. An India-rubber cloth should be spread over the edges of the bed, and the patient's feet having been placed on chairs, and the knees carefully covered with blankets, an intra-uterine injection of solution of bichloride of mercury (one to one thousand) should be made. The tube recommended was the glass one of Dr. Chamberlain, modified by reducing the number of waste holes, so that the injection could be carried more effectually to the fundus. Another instrument recommended was the ingenious metallic tube devised by Dr. George H. Lyman, of Boston, which had the advantage of affording a perfect means of escape for the fluid injected into the uterus. In either case, the instrument was to be fitted to a Davidson or Higginson syringe, the intermittent action of which was considered much preferable to the continuous but feeble stream of the fountain syringe. In any case where it was supposed that a portion of the placenta was retained, chloroform was to be given, and the adherent parts, if found, removed by means of the nails acting as a curette. In other cases, it was desirable to carry a sponge dipped in antiseptic fluid up into the uterus.

The method of intra-uterine injection was attended with the following dangers:

First. The entrance of air into the uterine sinuses.

Second. Hemorrhage.

Third. The carrying of poison by the extremity of the syringe directly into the circulation through the open sinuses.

Fourth. Pain, shock, or convulsions, from the effect upon the nervous system.

Fifth. Entrance of fluid into the peritoneum through the Fallopian tubes, and consequent peritonitis. Great care should, therefore, be practised in making the injections, and the tube should never be allowed to fill completely either the *os internum* or *os externum*. In order to prevent this, it is sometimes necessary first to dilate the os with the fingers, by means of Barnes's dilators, or in some other way.

It is desirable to have persulphate of iron always on hand, in case of hemorrhage from dislodgment of a thrombus. If this occurred, ergot should also be used freely. Several deaths have been reported from the use of intra-uterine injections. In a considerable experience with them, Dr. Thomas, however, has met with but one fatal case. The frequency of the injections should vary according to the severity of the disease. In mild cases one in every five hours was sufficient. In others the injections should be repeated every three hours, and in bad cases every hour. They should always be made by the physician, and administered with strict attention to details; special care being taken that the fluid always reached the fundus. Dr. Thomas had himself believed for several years in the efficacy of the steady stream of the fountain syringe; but he had afterwards become convinced that the intermittent stream was much preferable. Some had adopted the plan of continuous irrigation; but this he believed to be a delusion and a snare. The objection to it was the difficulty of getting the germicide fluid in contact with the whole endometrium by this means. For use in the vagina it was very desirable, and in very severe cases it might be useful to keep up constant irrigation of the uterus, and then, in addition, use the intermittent stream every three hours. That plan was the best which accomplished most thoroughly the cleansing of the parts.

The third point in the treatment was to control the high temperature, which was one of the immediate factors of a fatal issue. Even if the fever did not prove fatal, its effects are always more or less serious. For the reduction of this he had formerly employed Kibbee's cot, but was now in the habit of resorting to the use of Townsend's rubber coil in preference. This was simply a mat made up of a long rubber tube coiled in circles upon itself and which, when in position, covered the entire abdomen; extending from the symphysis pubis to the ensiform cartilage. Through this a constant stream of iced water flowed: the extremity into which the water entered being provided with a little strainer to prevent the tube from becoming clogged by any impurities contained in the ice employed. The tub of iced water was placed about two or three feet above the level of the patient's body, and the end of the tube containing the strainer was anchored in it by a weight. The other end, by which the water escaped, emptied into a tub on the floor. By means of this refrigerating coil a temperature of 104° could be reduced to 100°, and kept at this point for weeks together. To this excellent method, however, the nurse, the patient, and the friends of the latter are apt to make the strongest objections, and even some physicians denounce it as liable to give rise to pneumonia, pleurisy or other serious attack. But such fears are entirely groundless. In the Woman's Hospital after laparotomy it was as freely in use as poultices, and every one of the successive house-staffs leaving the institution went away thoroughly impressed with its superior advantages. In some cases its effect was not apparent for a considerable time; so that the temperature was not reduced for twenty-four hours, and even longer. In every case its prolonged use was essential, and removing the coil from the body for even an hour at a time might be productive of much injury. Dr. Thomas had never seen any bad results from it if hot water bottles were kept applied to the soles of the feet. He had never known pleurisy or pneumonia to be caused by it.

In the fourth place, febrifuges given by the mouth were advised, especially for the purpose of keeping off chills. Fifteen grains of quinine might be employed night and morning, or, in place of this, two capsules of Warburg's tincture, as recommended by Dr. John T. Metcalfe. Salicylate of soda was also of service in some cases.

Fifth. The patient should be sustained principally by a milk diet, but the animal broths are also to be freely used.

Sixth. Efficient and abundant assistance is absolutely essential for the proper carrying out of the treatment. With only one nurse and one physician, this is simply impossible. A day nurse and a night nurse are required, and it is highly desirable that a physician should be in the house the entire time. As to the various antiseptic agents to which attention had been called during the last few years, only two seem to be of really practical service, carbolic acid and bichloride of mercury. For the use of the latter in this connection, the profession is mainly indebted to the investigations of Koch, and for a intra-uterine injection it is to be used in the strength of one part to a thousand. If carbolic acid be used, a two per cent., or two and one half per cent. solution is the best for this purpose.

Dr. Wm. M. Polk said that the Academy was deeply indebted to Dr. Thomas for his able and even eloquent presentment of this most important subject. He had left but little to be said, as regards the treatment of puerperal septicæmia. In the matter of pathology, he thought it would perhaps have been better if he had planted himself squarely in the position that puerperal fever was identical with pyæmia and septicæmia. For himself, he considered it absolutely identical with surgical septicæmia and pyæmia. The lesions were those which belonged to these affections; and it was only in the domain of etiology that those who were opposed to this view found their ground of support. They claimed that there was some peculiar and specific germ which gave rise to the trouble. In regard to the treatment, the principles of Listerism, as laid down by Lister and his followers, and as ably set forth to-night by Dr. Thomas, entirely covered the ground. He would merely add that in this city, where there was so much bad drainage, the question of the purity of the air breathed by the patient assumed great importance. So far as the means of actual treatment were concerned, he had one suggestion to make. In his experience, he had found, sometimes, that he had been using intra-uterine irrigation when the lesion which was killing the patient was really in the cervix, and the stream employed was not of sufficient strength to separate the surfaces. His plan now, therefore, was to place the patient in the ordinary position for the purpose, and make a thorough examination by means of Sims's speculum. The entire canal as far as the os uteri could thus be observed, and if any lesion were observed, a strong solution of carbolic acid or other antiseptic was applied directly to the spot. If no source of trouble could thus be detected, he swabbed out the interior of the uterus with borated cotton dipped in a two per cent. solution of carbolic acid, and perhaps used in addition Skene's broad curette, the edge of which was blunt. In conclusion, he would only say that if we were to adopt the preventive measures so forcibly insisted upon in the paper, we must go further and plant ourselves firmly on the ground that puerperal fever was identical with surgical pyæmia and septicæmia.

Dr. James B. Hunter said that he wished to speak of only two or three purely practical points. There was great difficulty in carrying out the energetic plan of treatment recommended by Dr. Thomas. Thus there are many people who are neither poor nor rich, and while they could not avail themselves of the facilities offered by the hospitals, they could not possibly afford the expense which such a plan entailed in their own homes. It was very important, he thought, that the patient should be disturbed as little as possible, and on this account he considered it objectionable to have to move the patient to the edge of the bed every time that an injection was made. His own plan was simply to slip a bed-pan under her, and administer the injection while she was lying upon the back. As to the instrument employed, he had found that with the ordinary Chamberlain tube the fluid could not be carried to the fundus, and he had therefore had a tube made which was about half the size of this, and which had orifices only at the end. The reason that he employed so small a tube was that he had found that the os uteri contracted considerably after two or three hours, and it was sometimes necessary to dilate it. Nott's double catheter answered very well for making intra-uterine injections. In carrying out the plan of injections, opposition was likely to be met with on the part not only of nurses and patients, but of physicians. In one or two cases, he had seen slight chills caused by them, but he believed them to be due to the fact that the water was not warm enough. In regard to the cooling apparatus, he did not believe that the coil was called for in simple puerperal septicæmia. In peritonitis, however, and after laparotomy, he had the strongest faith in it, and constantly employed it in his practice. In septicæmia, even if the fever were kept down to a low point, the disease might be of the most serious nature. When the coil was used, he preferred the metallic tubing, as being lighter and more readily kept clean than the other.

Dr. Partridge advocated the injection of iodoform suspended in glycerine after the ordinary douche, as suggested by the late Dr. Brinsly Livingston.

The President then said that twenty-five years ago the Academy had had a long discussion on puerperal fever, and eight years ago a similar one had been held in the London Obstetrical Society, during which he had had the honor of having a special evening set apart for the exposition of his own views on the subject. He believed that there were many others present who would like to have an opportunity of expressing their opinions, but who could not do so this evening on account of the lateness of the hour; and he would, therefore, make the proposition that the first meeting in February should be devoted to a discussion of this subject. At the second meeting in January, a well-known surgeon was to read a paper on antiseptic treatment in general surgery, and it would, therefore, come in very appropriately. On motion, Dr. Barker's suggestion was adopted, and the Academy then adjourned.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Thursday Evening, Nov. 22, 1883.

The President, James Tyson, M.D., in the Chair.

Dr. J. H. Musser exhibited the

LARGE INTESTINES FROM TWO CASES OF CHRONIC DYSENTERY; ONE OF THEM SHOWING PSEUDO-POLYPI.

Case I.—The patient had chronic dysentery; further clinical information cannot be given. No record of autopsy preserved. The specimen is from the museum of the Presbyterian Hospital, and is presented on account of its rarity. It is a part of the large intestine, fourteen inches long. To the naked eye it shows thickening of the mucous and submucous layers, and hypertrophy of the muscular layer. On the surface of the mucous coat, innumerable polypoid growths are observed, some pedunculated, some sessile The sessile growths are from the size of a millet-seed to that of a chestnut, round or ovoid. The others also vary in size from a pea to a large bean; their pedicle is generally from one-sixteenth to one-eighth of an inch long. The reporter remembered seeing the specimen when recently removed, and knows there were more pseudo-polypi than are here visible, many having fallen off from handling, etc.; that there was scarcely any healthy mucous membrane; that in this part of the intestine, there was almost complete ulceration of the mucous coat. At one point, a large stellate cicatrix, depressed in the centre, is noticeable, while all over the surface cicatricial lines are observed, most distinct about the bases of the growths.

In connection with this specimen, Dr. Musser called attention to a minute description of a similar specimen by Dr. J. J. Woodward, U. S. A., whose article appeared in the American Journal of the Medical Sciences for January, 1881, and is entitled "Pseudo-polypi of the Colon; an Anomalous Result of Follicular Ulceration." According to the writer, the origin and development of these polypi are as follows: 1. A granulating ulcerated surface of the intestine. 2. Numerous islets of mucous membrane on this surface. 3. "The formation of cicatricial contractions commenced in the infiltrated submucosa, constricting the margins of the islets of mucous membrane which were further transformed by hyperplastic inflammatory processes until ultimately they acquired the form of pedunculated excrescences, and projected into the lumen of the intestine, like so many little polypi"—being pushed out by the contraction of the connective tissue. Although the surface of the mucous membrane appeared to the naked eye healthy, the microscope showed that it was submucous connective tissue infiltrated with lymphoid elements. The pseudo-polypi were composed of a central portion of connective tissue and a peripheral portion of diseased mucous membrane, the former continuous with the submucous layer, the latter limited to the surface of the growth. The histological changes in the mucous and submucous layers resembled those of chronic inflammation. The remainder of the bowel showed follicular ulceration. I am unable to say what was the condition of other parts of the bowel in the specimen exhibited.

Case II.—The specimens were removed from a patient who had been a sufferer from chronic dysentery for some time. The bowel affection was especially severe during the past summer. He had been ill of an acute exacerbation for about one week when medical advice was sought. The symptoms were those of an acute dysentery, but were not alarming. The effects of the habit of using chloroform, chloral, and alcoholics to excess, which habit he continued during his illness, complicated the clinical features. About the tenth day of his illness the typhoid state suddenly developed, and he died in coma two days thereafter. His temperature never was higher than 102°, tormina and tenesmus were marked, bloody and mucous discharges were excessive.

Autopsy, eighteen hours after death: Rigor mortis marked; body well nourished. On section, the abdominal walls were loaded with fat, and large deposits of this tissue were found in the great and lesser omentum, the mesocolon, and the epiploicæ. The mesenteric and lumbar lymphatic glands were not enlarged. The cæcum was surrounded by old lymph; the appendix was bound down by adhesions and thickened. The cæcum was dilated, the transverse and descending colon contracted; the walls of the entire colon were thickened. On opening the large intestine, it was found to be extensively ulcerated. The mucous membrane and the ulcers were strikingly anæmic, and of a pale cream color; there were no points of hemorrhage. The walls were thickened, the mucous membrane swollen, the ulcers were more numerous and larger in size at the cæcum. The smaller ulcers were the size of a dime; some of the larger extended around the gut, and were from one-half inch to an inch wide. The edges of the ulcers were regular, bevelled, and thickened, the floor rather clean; the deepest did not extend beyond the muscular coat, the more superficial only included the mucous membrane. The larger ulcers were on the tops of the folds of the intestines. A tenacious, thick mucus covered alike the ulcers and the adjacent structures.

Condition of other organs: Liver enlarged and fatty; kidneys markedly cirrhotic; spleen normal; heart slightly hypertrophied. Microscopical examination revealed the changes in the intestine of chronic inflammation, and that the ulceration was of a simple nature and not due to tubercle.

DR. W. G. MACCONNELL presented the specimen from

A CASE OF CARCINOMATOUS SARCOMA OF THE LEFT TESTICLE

which was removed from a young man, by Prof. Brinton, at the surgical clinic of the Jefferson Medical College Hospital, on Wednesday, November 7, 1883. History: Jacob A., æt. 26 years, a clerk; about eighteen months ago he struck his testicle in mounting his horse on the pommel of the saddle, from the pain of which he fainted; no inflammatory enlargement however of the organ ensued. Last May he noticed that the left testicle had begun to enlarge, and continuously increased in size until it had attained its present volume. There was a sense of heaviness in the tumor, but no pain was experienced until about two weeks prior to its removal, when he noticed a periodical pain of a burning nature, which, with the increasing size of the organ, caused him to apply for relief. It weighed about eight ounces and measured in its long diameter four and a half, transversely three and a quarter inches, and about two and a quarter inches in thickness. No lymphatic involvement was present, nor was the cord involved; the veins of the scrotum were enlarged and prominent. The tunica vaginalis testis is slightly thickened, and very opaque; the tunica albuginea is also thickened; a slight remnant of the epididymis exists, in the form of a small fibrous lump. Its shape is somewhat that of a kidney, and upon section showed a moderately firm buffy colored tissue; it did not cry under the knife. In color and consistence it resembled the soft fibromata; distinct remains of the fibrous septa are to be seen; there are no cystic changes or any chondroid tissue present. Its macroscopical appearance and consistence suggested a spindle-celled sarcoma, and as such upon section I diagnosed it. Microscopically at a first examination, from the great ecstasy of the epithelium present, I was inclined to regard it as a pure medullary carcinoma; but after a careful study of several sections, I am inclined, by reason of the juvenescence of the connective tissue, both round and spindle-cells being present, to call it a carcinomatous sarcoma. There was no history of syphilis, scrofula, or tubercle, nor had any member of his family ever labored under any form of tumor.

DR. NANCREDE called attention to the fact that modern microscopic study has shown that carcinoma of the testicle is a rare disease, most malignant tumors of that organ being really sarcomata. In this connection it is of much practical interest to note that the system becomes infected at a relatively late period of the disease, so that when a sarcomatous testicle is removed at an early stage of the disease, prolonged immunity, if not actual cure, resulted. The inguinal and retro-peritoneal glands were those affected, their enlargement, by pressure, pain, etc., being the ultimate cause of death. Even more distant lymphatic glands are in rare cases involved.

DR. FORMAD agreed with Dr. Nancrede. Some years back he had paid special attention to the study of malignant growths of the testicle and ovary. Of the former he had examined thirty cases, all of which were sarcomata. He did not believe in the existence of such a growth as true carcinoma of either the testicle, ovary, or kidney. The so-called carcinoma of those organs exhibits cells of a *connective-tissue type*, rather than of an epithelial. Dr. Formad considered, with many other observers, that the so-called epithelial cells of kidney, testicle, and ovary are really *endothelial*, and gave reasons in support of this view. He further said that there is a variety of endothelial carcinoma occurring in the breast, which is that usually described as alveolar sarcoma. Here the endothelial cells of the lymph-spaces proliferate, but the glandular elements of the mammæ do not participate. It is doubtless from the examination of such tumors that Virchow and Cornil and Ranvier have gained the erroneous idea that true carcinoma takes its origin from connective tissue. He suggested the term "*endothelial* carcinoma" for such tumors, instead of "alveolar sarcoma."

NEW YORK SURGICAL SOCIETY.

Stated Meeting, November 13, 1883.

THE PRESIDENT, THOMAS M. MARKOE, M.D., IN THE CHAIR.

TUBAL GESTATION; RUPTURE OF THE TUBE AT THE END OF THE SECOND MONTH; INTERNAL HEMORRHAGE; ABDOMINAL SECTION: LIGATION OF TUBE; DEATH IN FORTY-SEVEN HOURS, FROM SHOCK.

DR. CHARLES K. BRIDDON presented a specimen, accompanied by the following history: Mrs. K. I. K., æt. 28, a short, stout brunette, measuring five feet and less than one inch, and weighing one hundred and fifty-five pounds, is the mother of two children, one three years, the other thirteen months old. She has always enjoyed good health. Her last normal menstruation occurred on the tenth day of August, 1883. Two months subsequently, on the tenth day of October, she had a flow of clotted blood, accompanied by pain of an intermittent character. On the sixteenth day of the same month, while out walking, she was taken with sudden severe pain, and was obliged to sit down for some minutes. The pain continued with diminished severity until after she reached home. When I saw her she was suffering considerably. The pain was pelvic, and did not appear to be more acute on one side than on the other. It was continuous, but aggravated at uncertain intervals by paroxysms of increased severity. She says that when the pain attacked her in the street she felt something flow from her vagina, but on examining her linen found it only soiled with a little mucus. She complained of being unable to urinate. There was no increase of temperature; no acceleration of pulse, or of respiration. On making an examination, I found the os low, and slightly displaced forward. It was soft, and dilated sufficiently to admit the first phalanx of the index finger. The body of the uterus was exquisitely sensitive and enlarged. Though the physical conditions of retroversion were not present, I thought the inability to urinate might be occasioned by some mechanical impediment. I emptied her bladder, and placing her in the knee-elbow position, found that on opening the vulva the uterus receded, and there was nothing at all to be felt in the cul-de-sac. Rest, and a few doses of chlorodyne for treatment, and in a few days she was well.

On the afternoon of the 29th she was again attacked with pain, and although there was no flow I suspected that abortion was imminent, and prescribed an anodyne and rest. I received a second urgent message to see her at 7 P. M., and found her suffering from symptoms of internal hemorrhage. She exclaimed that she was dying. Her extremities were cool, her face was pallid, and I could detect no radial pulse. I had no hesitation in expressing the opinion that the case was one of tubal pregnancy, and that rupture had taken place. I explained the dangerous character of the condition to her husband, the probability that prompt action would have to be taken, and I requested counsel. Dr. H. F. Walker saw the case with me before nine o'clock, and suggested that we should call in Prof. T. G. Thomas, who saw the patient at half-past nine. There was no division of opinion, all were agreed that an abdominal section and the institution of such means as would secure against the further escape of blood, were the only ones calculated to afford even the slightest chance of recovery. The consent of the patient and her friends being obtained, the only delay was occasioned by the insistance on their part that she should receive the sacrament before the operation.

I was ably assisted by my friends, Drs. Gerster, Walker, and Scharlaw, and it affords me great pleasure to testify to the kindness and promptness with which they responded to my call for assistance under very trying circumstances. Ether was administered by Dr. Scharlaw, and very little indeed was used. The corpulence of the patient made it necessary to make a long incision, reaching from the umbilicus to the pubis. Her collapsed condition rendered this almost a bloodless proceeding. When the peritoneum was exposed a small incision was first made, which gave exit to a large amount of fluid blood. The incision was then enlarged sufficiently to admit the hand, and at least a pint of blood-clot was scraped out as rapidly as possible. The uterus was then drawn up as far as its connections would permit, and the cause of trouble was at once apparent. Part of an ovum, one inch and a quarter in diameter, was found protruding from a rent in the left Fallopian tube close to its uterine extremity. The broad ligament was lifted as much as possible, and a probe armed with a double, stout, plaited silk ligature was passed through it as low down as could be done, and the ends were firmly secured above the free border. In these manipulations the ovum was forced from its bed in the oviduct, and was removed entire. The hemorrhage appeared to be entirely controlled. The ligatures were cut short, and the toilet was completed by thorough cleansing of the cavity. The wound was then closed by silver-wire sutures. No time was lost in completing the dressing, but the patient was removed at once to bed, and surrounded with blankets and hot bottles. Her head was enveloped in a warm woollen shawl. A small hypodermic of morphine was administered, and brandy used subcutaneously. It was not, however, until after midnight that an occasional flicker could be felt in the pulse at the wrist. Vomiting, which occurred, was treated by frequent sips of hot water, nutrient and stimulant enemata were used all through the night. On the morning of the 30th, her appearance was much improved. She was inclined to talk, was even cheerful, and expressed herself as entirely free from pain. She only complained of vomiting, but notwithstanding these favorable signs her pulse could scarcely be felt, much less counted. At times it could not be distinguished at all. Temperature was 101°, respiration 36. At 10 A. M., her pulse could be counted, 126, and after this it improved for twenty-four hours, averaging 130; temperature for the same period, 101° to 102°. In spite of the most assiduous stimulation, the circulation could not be maintained. She began to sink on the afternoon of the 31st, and died at 9.30, forty-seven hours after the operation.

Sectio Cadaveris.—October 31st, 11 P. M. Abdomen only moderately distended. Abdominal wound agglutinated, but easily separated. Omentum adherent to peritoneal surface in the neighborhood of the line of incision; no general diffuse peritonitis. About two ounces of odorless bloody fluid in the cavity of the pelvis; the left broad ligament adherent to anterior wall of rectum; uterus enlarged to nearly twice its normal dimensions. At the junction of the left oviduct with, and encroaching upon the cornua itself, was an ovoid swelling about one inch in diameter, darker than the surrounding structures, of a mottled violaceous maroon color. Near the junction of the posterior wall of the duct with this swelling was a ragged opening, half an inch in length, and leading into a cavity formed mainly out of that portion of the duct which traverses the uterine wall, so that the specimen might be said to represent the variety known as interstitial, or, more correctly, sub-interstitial. On incising that portion of the cavity which was developed at the expense of uterine textures, it was found filled with adherent coagulum. The cavity of the uterus was not lined with decidua, and the uterine opening of the oviduct was impervious. Outside the rent were found the ligatures applied during life, and which had effectually controlled the hemorrhage.

Remarks.—About twenty years ago, a surgeon of this city, the late Dr. Stephen Rogers, was a vigorous advocate for the performance of laparotomy in cases of internal hemorrhage due to rupture of the oviduct, but the profession at that time was not prepared to accept the proposition. The great advances that have been made in abdominal surgery since then have paved the way, and although I am not aware that the operation has been performed, I can state advisedly that the matter has been much debated, and that the views of Dr. Rogers are now generally approved. Grailey Hewitt says, in the last edition of his work on the pathology, diagnosis, and treatment of the diseases of women:

"In cases of Fallopian pregnancy, if it were possible to make an exact diagnosis of these cases of rupture and hemorrhage during life, it would undoubtedly be better to open the abdomen, and endeavor to secure the bleeding vessels than to allow the patient to die of hemorrhage. No operation of the kind has ever been attempted, but the subject has formed matter of discussion on more than one occasion at the meetings of the Obstetrical Society of London."

Lawson Tait, in his recent book *On the Diseases of the Ovaries*, says:

"I have very little doubt, however, that many of these cases would be saved by prompt action. The difficulty is, of course, in the diagnosis, some certainty of which is requisite before an abdominal section can be performed. I have twice been on the point of performing abdominal section on account of suspected rupture of a Fallopian tube, and have been prevented by scruples as to the correctness of the diagnosis. In both cases, post-mortem abdominal section showed that the suspicion was correct, and I believe both of these patients might have been saved."

Other authorities might be quoted, endorsing the opinions thus expressed, but I think these will suffice to show the general conclusions of those most familiar with the subject. In the case which forms the basis of this communication, the subject of transfusion was entertained, and rejected. Previous to the operation, I could only conceive that it would have been harmful where we have to deal with concealed hemorrhage, and there are such doubts as to its precise location and character as may render it questionable whether we are warranted in adding the shock of an operation to that already existing. The issue of the case will dedend upon the success with which we can keep the circulation at a minimum consistent with life. If we resort to means which raise arterial tension, we shall interfere with the conservative progress which we initiate with more or less success in the application of hemostatics, and certainly cause further leakage from partially occluded vessels. In this case, after the blood-supply was cut off by the application of ligatures, I had faith in the natural robustness of the patient, and though she hovered between life and death for twenty-four hours, the condition of the pulse after that time and up to within a few hours of death justified the confidence I had placed in those resources. The heart failure, which occurred more than forty hours after the bleeding was arrested, I attributed to shock, which I did not think could be beneficially influenced by transfusion, and, consequently, did not feel warranted in resorting to a means that I certainly do not regard as free from danger.

ANCHYLOSIS OF KNEE IN FLEXED POSITION; RESECTION; WIRING BONES TOGETHER IN A STRAIGHT POSITION; GANGRENE OF LEG AND FOOT; AMPUTATION OF THIGH; DEATH.

DR. A. C. POST presented a specimen, accompanied by the following history: A. P., mulatto, ætatis 38, left knee anchylosed in a flexed position at an angle of 60°. At the age of eleven years, he cut his knee with an axe, and the anchylosis was the result of the inflammation which followed the injury.

July 5, 1883, I operated on him by making a transverse incision over the greatest convexity of the knee, the incision dividing the integument over the anterior and lateral parts to the extent of three-quarters of the circumference of the limb. Several small arteries were cut and tied. I then with a saw removed a large wedge-shaped segment of the bone, and afterwards several smaller fragments. I also divided the tendon of the biceps, semitendinosus, semimembranosus, gracilis, and sartorius, after which I was able to bring the bony surfaces in contact, in an extended position of the limb. Considerable resistance was offered by the popliteal nerve, which finally yielded without rupture. I then drilled four holes obliquely through each segment of the bone, through which I inserted flexible iron wires, which I twisted so as to keep the bones in position. After this, I applied an iron splint along the posterior surface of the limb, and one on each lateral surface. The lateral splints were each bent at four right angles, so as to leave an open surface on each side of the knee. Plaster-of-Paris bandages were then applied over the thigh and leg, holding the splints in position, but leaving a space of more than six inches over the knee uncovered, so as to give free access to the wound. The wound was washed with carbolic acid, 1 to 40, and the integuments were brought together with sutures, except at the posterior part, where a large, open space was left for drainage. The parts about the wound were then covered with lint, wet with carbolic acid, 1 to 40. The operation was completed at about seven P.M. At about eleven P.M., I was summoned to the patient, on account of hemorrhage. I found that there had been considerable oozing of venous blood. I had the limb elevated; applied compresses over the wound, secured by a roller bandage, and suspended the limb to the ceiling, with the foot elevated about fifteen inches above the bed.

July 6.—There has been no return of bleeding. The patient has been much more comfortable since the suspension of the limb. As his circulation was very languid, and he had been accustomed to the free use of alcoholic drinks, I directed an ounce of whiskey once in three hours, in the form of eggnog or of milk-punch.

7th.—He has had frequent vomiting, and has scarcely retained anything on his stomach. A sinapism was directed to be applied over the epigastrium, and a scruple of calomel was administered, after which porter and lime-water were directed to be given, a half ounce of each every hour. Rectal alimentation was ordered, with stimulants.

8th.—Vomiting has nearly ceased. His pulse has a little more force, but is still feeble. The integument about the heel has a livid appearance, but has not lost its sensibility. The lower flap of integument in front of the knee is quite hard, but the upper flap is of a good color.

9th.—The leg and foot are decidedly gangrenous. I amputated the thigh about eleven centimetres above where the bone had been divided in the resection, leaving a large anterior flap.

10th.—The patient has not rallied well since the amputation. The pulse is feeble and the surface cold. He continued to sink, and died in the afternoon. He had taken stimulants freely, but very little food.

The fatal result in this case was largely to be attributed to the previous habits of the patient.

TUBERCULAR ORCHITIS.

DR. A. G. GERSTER presented a specimen with the following history. It was a testicle removed from a man forty-one years of age, and was the seat of tubercular orchitis. A diagnosis was made before any fistula formed, from the fact that an acute orchitis, which resulted from injury, had never completely subsided. The patient, two or three weeks before Dr. Gerster saw him, had chills and night sweats, and the spermatic cord became infiltrated and indurated close up to the internal ring. Castration was performed and the patient did well. When the tunica vaginalis was opened the tissues presented an appearance similar to that seen in fungous condition of the joints, but the centre of the testicle contained a large tubercular focus.

The Society then proceeded to the transaction of miscellaneous business.

NEWS ITEMS.

BOSTON.

(From our Special Correspondent.)

The Children's Hospital.—A description of the new building for the Children's Hospital of this city, completed one year ago, was given at that time in The Medical News. It will be remembered that the building, as it then stood, was composed of the central main structure and the western wing. The plans of the architect include an eastern wing, which has not yet been added, but will be so soon as needed and the means allow. The large dwelling-house formerly occupied by this charity had accommodations for thirty patients. The new hospital, as now arranged, can accommodate sixty patients. The number treated during the past year has been much larger than ever before, and it is for this reason that the hospital management has just issued an appeal for more funds. If the public fails to respond, the alternative pronounced is either that the use of the hospital must be limited to a few patients or be closed.

This rather startling statement undoubtedly will arouse the friends of the institution to the necessary effort, for the charity is one which cannot be spared. The appeal calls for funds, not only for this year, but for several years to come. The invested funds of the hospital pay an income of $5000. The income necessary for the proper conduct of the hospital is $16,000. The need, therefore, is about $12,000 additional yearly. The names attached to the appeal are so influential that it is thought a generous response will be made.

HARTFORD.

(From our Special Correspondent.)

Typhoid Fever in Connecticut.—There has been during the last few years a very marked increase in the prevalence of typhoid fever in this State. From 1872, when malarial diseases had become prevalent over a wide area, until 1880, there was a very decided decrease, in fact, a total disappearance of the disease in many places, so that the percentage of deaths, from all reported causes, fell from an average of about 4.54 to 1.77 in 1879. Since then, there has been a rapid increase in the number of cases of typhoid fever. This has been very noticeable from the fact that for a long period so few cases were seen. Even where malarial diseases did not exist, there was a decrease in the prevalence of typhoid fever. This is clearly shown in the table on pages 77–82 of the fifth report of the State Board of Health of Connecticut, also in the one on page 110 concerning typhoid fever since there has been a registration law in the State. Since 1882, the disease has about reached its former rank as one of the ten principal causes of death, and not the lowest place among them either.

In many places outside of Connecticut, there have been during the last two years epidemics of typhoid fever in Paris, London, New York, Providence, and elsewhere, so that it would appear that there were some general conditions favorable to the development of typhoid fever, in addition to the local unsanitary conditions that might determine the place where the epidemic should appear, or else a general movement in obedience to some law of periodicity not yet generally understood.

Whatever may be the causes, there has been a very decided increase in the number of cases of typhoid fever. There have been no extensive epidemics—that in *Waterbury* has been the most marked. There the upheaval of the streets in laying a system of sewer pipes for the city, and the long-continued dry weather, favoring all unhealthy telluric influences, as well as lowering the reservoirs and wells, furnished the only general local conditions favorable to the disease.

Last autumn there was quite a large number of cases in *Hartford*, with ten deaths in September.

This year there is more typhoid fever than there has been for some years in *New Haven*, but no epidemic.

Had there been the usual amount of typhoid fever from year to year, the number of cases would not attract so much attention. There have been many exaggerated reports, and other diseases have been confounded with typhoid fever. This is the case in regard to *Forestville*, where the closing of the schools to prevent the spread of diphtheria, has been stated to be due to an epidemic of typhoid fever, of which there have been but three cases, as far as I can learn. So in *New Haven*, there have been several cases of typhoid fever among the students, but one or two of which were contracted at the college, or were among persons occupying rooms at the college. The fact that typhoid fever is unusually prevalent in the city, has, no doubt, led to the mistaken idea that there has been a large number of cases at the college.

From reports from other places, it would appear that there have been some general conditions during the last few months favorable to the development of typhoid fever, and that there has not only been an unusual prevalence in localities where local unsanitary conditions favored its development, but also here and there epidemics of greater or less severity.

In this State where there had heretofore been supposed to be such an antagonism between the diseases that when one appeared the other must of necessity disappear, we have of late seen side by side typhoid fever and tertian ague, and, in fact, typhoid fever in one house, and typho-malarial fever in the next, or some other variety of malarial disease. While we hope that this return of typhoid fever is an indication that malarial diseases are about to leave us, and, in fact, a noticeable decrease in their frequency and in the general tendency towards periodicity in all diseases strengthens this hope. There is no such antagonism between malaria and typhoid that excludes the one if the other be present.

CHICAGO.

(From our Special Correspondent.)

St. Luke's Hospital.—The new building of St. Luke's Hospital, which, it was expected, would be ready for occupancy this winter, it is now announced cannot be completed before next June. There have been expended already $70,000, and nearly as much more is asked for. In the old building the institution, during the past year, cared for upwards of eighteen hundred patients both in and out of the wards. This hospital is the work of the Protestant Episcopal Church, and draws most of its support from that order. Six beds have been endowed at $4000 each, and eighteen are supported by annual payments of $300 each. This is certainly a fairer basis for endowment of beds in hospitals than that adopted by our "Relief and Aid Society" after the great fire. The Society endowed nearly or quite one hundred beds in the various hospitals of the city, from funds donated at the time of the fire, at $1000 each. Of course the Society does not keep these beds full, even in times of epidemics. If they did, it would ruin any one of the hospitals.

ST. LOUIS.

(From our Special Correspondent.)

A New-Code Society to be Formed.—A new medical society is being formed consisting of a few dissatisfied members of the St. Louis Medical Society, headed by the gentleman who resigned because he was unwilling to accede to the rules of the Association. As announced under his signature in the various daily papers, this new growth, to be called the Pathological Society, is to consist only of men who had already attained a high degree of culture before they began their medical studies. "In the matter of advertising, both in the daily and medical journals, the most liberal principles will govern 'this new society,' and," this modest annunciator continues, "it will league with the New York Academy of Medicine, the Pathological Society of Philadelphia, and other similar associations, for purposes of united action." *Nous voila !*

WASHINGTON.

(*From our Special Correspondent.*)

The National Board of Health, which met in Washington, D. C., on the 5th inst., decided to present its claims to Congress in a request for the reënactment of the Quarantine Bill of June 2, 1879, without the penalty clauses in said bill, it having been found to be impracticable to enforce the penalties.

No other business of importance was transacted. Dr. H. A Johnson, of Chicago, a member of the Board, signified his intention to resign before the next meeting.

CANADA.

(*From our Special Correspondent.*)

Actinomycosis in Canadian Cattle.—In the morbid anatomy demonstrations on November 24 and December 1, at McGill College, Dr. Osler showed five specimens of this disease, which he stated appeared to be very common in Canadian herds. During the past summer he had with Mr. Clement, V. S. Assistant Government Inspector of Stock, seen many cases among the animals inspected prior to shipping. As the Department of Agriculture had no orders regarding the disease, the animals were not condemned. The specimens shown were two jaws in an advanced, and one in an early stage of the disease, and two of throat and contiguous lymph glands. In only one of the animals had the growth produced much constitutional disturbance, as shown by the rough coat and emaciated condition. The characteristic fungus actinomyces was present in each instance. In cattle the affection is local, rarely attacking the internal organs, and does not seem to disturb the general health until the jaw tumor interferes seriously with mastication. It is inoculable, but probably not directly contagious. The origin and life history of the fungus still remain dark. Additional interest pertains to the disease from the fact that it occurs in man, in whom some twenty cases have been described; all in Germany. The human affection is more severe, metastasis is common, and it is possible that the *actinomyces hominis* may be a separate variety. It is a significant fact that Johne inoculated without success two hogs and a calf with fresh material from man. A question of sanitary importance arises in connection with the flesh of animals so affected. Is it fit for consumption? Certainly not when the general health of the animal appears to have suffered in consequence; but when the disease is local and not advanced, the animal may be in excellent condition, as was the case with many of the large-jawed oxen sent from this port to England during the past summer. Cattle-dealers, however, seem to know that the disease damages the animal. Principal McLachran, of the Montreal Veterinary College, informs me that in the purchase of cattle in the western ranches, the stipulation "no big-jawed animals" is not infrequently made.

Leprosy in New Brunswick.—During the past summer Dr. Graham, of Toronto, spent ten days at Tracadie, and made a thorough investigation into the history of leprosy in this settlement. His results have appeared in the October and November numbers of the *Canada Medical and Surgical Journal.* In the latter genealogical charts are given of the chief families affected.

The Medical Schools.—The business depression throughout the country has had the usual effect of forcing a larger number of young men into the professions. The attendance of students at the medical schools is considerably above the average. The total number last session at all the schools, was not quite seven hundred; this year it is estimated, from the returns available, that the number reaches eight hundred. McGill and Trinity have each over two hundred; and the Toronto School numbers over seventy new entries.

A new school has been opened at Winnipeg, Man.

The papal delegate Monseignor Smeulders has been busy taking evidence in the Laval-Victoria case. He has, it is understood, full power to settle the differences between these rival schools.

The British Association for the Advancement of Science.—Notice has just been received of the appointment of the local Vice-Presidents and Secretaries of sections for the meeting which takes place in Montreal on the 27th of August next. Over five hundred members have signified their intention to come, and among them will be many of the leading scientific men in the profession.

La Société d'Hygiene du Province de Quebec.—An association with this title has been organized by the French Canadian Physicians. Dr. Tafard, of Montreal, is the President.

LONDON.

(*From our Special Correspondent.*)

Myxœdema.—On Friday evening, November 23d, the subject which occupied nearly the whole of the time of the meeting of the Clinical Society of London was "Myxœdema." The discussion was excited by the narration and exhibition of a well-marked case of the disease in a middle-aged woman (fifty years) by Dr. Drewitt. After a short pause, during which it was evident that the members awaited the introduction of the debate by Sir William Gull, the work began. This distinguished physician had nothing new to impart, and merely gave a brief sketch of the main features of the disease, as well as a short excursus into the possible pathology of the affection. The course of the malady was described as progressively, but slowly, onward to a fatal termination. In the way of treatment Sir William said that he knew of nothing which could stay its progress.

Extirpation of the Thyroid.—Dr. Felix Sémon read a brief communication comprising some account of certain results, which Prof. Kocher had noticed as ensuing on extirpation of the thyroid gland, and which fairly took the majority, if not the whole, of the audience by surprise—for no one present seemed to have heard of these remarkable statistics. It appears that Prof. Kocher, of Berne, has done something like one hundred extirpations (partial and complete) of the thyroid body. In a large number of the cases in which total extirpation had been practised a train of symptoms had come on insidiously, after considerable periods of time had elapsed since the operation. The patients, previously bright and active, tardily became dull and incapable of exertion; swellings of different parts of the body, but notably of the eyelids, came and went before making a permanent appearance—in fact a concourse of symptoms presented themselves, which tally very closely with the signs and phenomena observed in myxœdema. Many of the principal clinical physicians present at the meeting took part in the debate, but there were only three features which could be singled out as representative of the evening's work. Sir Andrew Clarke, the President, and others had had cases under their care in which the clinical course of the disease was by no means progressively worse. Indeed, one or two of the patients expressed themselves as perfectly well, but the eye of the physician was still able to see the remnants of the malady in their faces and actions. So that in the progress of the disease a new or, at all events, not hitherto well-known observation was brought to light, *i. e.*, the fluctuating course of the affection, and possible termination in nearly natural health.

Sir Andrew Clark also said that the amount of urea discharged per diem was sometimes in excess and sometimes below the average daily discharge. On this point Dr. Burney Yeo remarked that he had observed similar fluctuations in the amount of urea daily discharged in altogether different kinds of disease.

Dr. Radcliffe Crocker went further, and said that even in apparent health there was nothing which could with certainty be called an average daily amount of urea excretion. This statement was made from the results of experiments on dogs subjected to precise conditions. The last incident on which stress was thrown was the apparently great improvement in the state of the patients which could be effected by the internal use of jaborandi and the subcutaneous injection of its alkaloid (pilocarpin). Half drachm doses of infusion of jaborandi or one-twelfth of a grain to one-quarter of a grain doses of the nitrate of pilocarpin, given by the mouth or hypodermically, respectively, were stated to produce profuse diaphoresis and remarkable improvement of the powers and faculties of the patient.

The New Jersey Sanitary Association held its Ninth Annual Meeting at the State House, Trenton, on Thursday and Friday, December 6th and 7th. The address of the President, J. C. Bayles, C. E., of Orange, N. J., showed the methods by which sanitary information can be popularized. He objected to much of the floating and misleading sanitary items of newspapers as being from sources not reliable, although often good in intent. Sanitary lectures and tracts, and local sanitary associations were earnestly urged. The address well enforced the radical necessity of accurate sanitary knowledge for physicians and in the interests of the public and of the State. A paper by Dr. T. W. Harvey, of Orange, sustained the paludal view of *Marsh Miasm*, and also gave some personal experiences as to the power of well water from marshy lands to convey the malarial poison. Apropos to malaria, Dr. H. P. Godfrey, of Camden, read an elaborate essay on germs, and the value of our present knowledge as to them.

A paper by Prof. A. R. Leeds, on *The Agencies, Natural and Artificial, Affecting the Purity of the Passaic River below Paterson*, gave rise to an animated discussion, which at length was transferred to the Delaware and Philadelphia. Dr. Leeds maintains the power of some rivers, with due space between the reception of fresh sewage and the place of securing potable water, to dispose of all sewage.

Domestic Wells and Cisterns, and Their Best Method of Construction, was well presented by Dr. I. N. Pinkham, of Montclair. The contention was that most open wells are unsafe and must go, and be substituted by the driven well, or the common well closely cemented and arched about six feet below ground. Well constructed cisterns and the use of cistern water were also commended.

Appliances for Raising and Distributing Water were illustrated by Prof. C. L. Brackett, of Princeton, in a most interesting manner. He showed how electrical power, transferred from one dynamo machine to others, could overcome gravity, and how water be brought for use or removed for drainage from inland cities surrounded by hills, like Mexico. He also showed how sewage in the course of its distribution, as to a river, could, on the way, be greatly purified by small air-pipes all along the course, just touching the sewer stream, so as to secure the effect of the adhesion of air to the flowing liquid and consequent mixture and aeration.

Engineer J. J. R. Lewes discussed *Methods of Sewage Disposal without Discharge into Streams.* He agreed with J. Bailey Denton as to the power of soils to deal with sewage chiefly because of the access of air in the soil. He spoke of the various chemicals which will precipitate organic matter, and thought that a new plan of mixing this material with saw-dust and then using it for the fires under the boilers of the works promised success.

Prof. George H. Cook, of New Brunswick, discussed the various methods of *Filtration.* While recognizing most filters as removing only matter in suspension, he showed the importance of this. Beside, some filters, such as those of gravel, sand, and charcoal, give access to air and help oxidation. The value of alum as a precipitant was shown, and doubts expressed whether in moderate quantities there was any objection to its use.

School Hygiene was ably presented by Prof. H. B. Pierce, of New Brunswick; James Green, of Long Branch; and J. Madison Watson, of Elizabeth. Instead of generalizing, these papers proposed a model school-room, and model methods of applying physical exercises. A lively discussion was had over the present recess system, Prof. Pierce claiming that, with calisthenics, and with permission to children to go out as occasion might require, there was no need for the fifteen-minute recess. Others advocated a five-minute recess each hour or hour and a half.

The meeting brought together about fifty representative men from various parts of the State, besides a small local attendance. All felt well repaid by the excellent character of the papers and most of the discussions.

Yellow Fever in Mexico still exists in several towns, Manzanillo and Acapulco being the principal sufferers. Assistant Surgeon Main, U.S.M.H.S., stationed at Brownsville, Texas, states that the Mexicans are more alarmed at the appearance of scarlet fever, which is now prevailing as an epidemic in Puebla, than of yellow fever, as its mortality or sequelæ have proved more disastrous. He reports that quarantine restrictions were raised at Brownsville and Matamoras on the 15th of November, having been merely a quarantine of observation of late. He also states that a large lagoon which nearly surrounded the city of Matamoras has recently been drained, temporarily adding much to the unhealthfulness of the inhabitants, though of great importance for the future sanitary condition of the city.

The Sanitary Convention at London, Ontario.—The Province of Ontario, Canada, has just had a Sanitary Convention, at London, which was well attended. Typhoid fever has prevailed to an unusual extent in the province. Malaria has excited much attention the last two or three years. A paper on the typhoid plant quite took it for granted that its botany was complete. Prof. Arnott, of London, seemed quite in favor of a mill-dam war. Sixteen papers on various subjects occupied two days, and gave rise to much discussion.

The Provincial Asylum of Ontario, near London, has eight hundred and ninety nine inmates. In addition to a very large building, it has three cottages, and so combines the two systems. For the last two years the non-restraint method has been practised, with most excellent results. The resident physicians, once opposed to it, are now warm in its advocacy.

International Health Exhibition in 1884.—At the close of the International Fisheries Exhibition, His Royal Highness the Prince of Wales announced his intention of arranging to hold in the same buildings an International Exhibition of Food, Dress, Habitations, and Educational Appliances. This exhibition will be held on a great scale, and will, it is understood, be organized so as to embrace and bring into prominence illustrations of all that most affect the welfare of the people, not forgetting the poorer classes.

The New England Medical Register.—A new edition of the Register, revised by Dr. Francis Brown, will be published shortly.

Dr. William B. Platt on Saturday, November 24, obtained by examination the degree of Fellow of the Royal College of Surgeons of England. He is said to be the first native-born citizen of the United States who has obtained this degree. There were seventeen candidates, and nine succeeded in passing the examination.

Busts of von Langenbeck, Gräfe, and Dieffenbach, have been recently placed in the surgical amphitheatre of the University of Berlin.

Professor Johann Schnitzler.—The Emperor of Germany has recently appointed Dr. Schnitzler as Professor Extraordinary in the University of Vienna.

Dr. Markbreiter's Jubilee.—On November 4, Dr. Philip Markbreiter celebrated his fiftieth doctorate jubilee. He was the founder of the *Wiener Medizinal-Halle*, which subsequently became the *Wiener Medizinische Presse*, now current. He was presented with congratulatory addresses by his Vienna colleagues.

Schultze's Jubilee.—On November 1st the Twenty-fifth Jubilee of Prof. B. Schultze, as Professor and Director of the Gynecological Clinic, was celebrated in Jena. His colleagues and pupils presented him with a memorial album, and in the evening a reception was given to him.

Biographical Lexicon of Physicians of all Times and Peoples.—The first two fasciculi of this work, edited by Prof. A. Hirsch, with the assistance of an able corps of coeditors, have just appeared in Germany.

Real-Encyklopädie der Gesammten Heilkunde.—This valuable work, under the editorship of Professor Eulenburg, has just been completed.

The City of Vienna, Austria, is not a very healthy place for consumptives, judging from the weekly reports: For week ending October 27th, there were eighty-two deaths from consumption and thirty-six deaths from acute lung diseases in that city, and the week previous a still greater mortality.

Concerted Action by State Boards of Health.—There has been a growing conviction among leading sanitarians intrusted with the official execution of practical health measures, that while the work of the American Public Health Association is of inestimable value in promoting the interests of sanitary science and sanitary reform, there is a constantly increasing need for an annual conference of State and other health officials in regard to practical affairs of their everyday work, some part of which work cannot profitably be discussed in a public meeting consisting largely of persons not familiar with its details.

After due consideration, a meeting of representatives of State boards was held at Detroit, during the recent meeting of the American Public Health Association, at which, after discussion, it was decided to call a meeting of the secretaries or other representatives of all State Boards of Health, in Washington, during May, 1884, for the purposes mentioned, and with the view of organizing a section devoted to State Board work in the present Association, or the formation of a permanent separate organization especially adapted to the needs of State Boards of Health. Drs. Henry B. Baker, of Michigan, and J. N. McCormack, of Kentucky, were appointed a committee to confer with and secure the coöperation of all the State Boards in fulfilling the object of the meeting, and Drs. C. W. Chamberlain, of Connecticut, J. E. Reeves, of West Virginia, and Stephen Smith, of New York, were appointed a Committee on Organization, to report at the meeting in May. The American Medical Association meets in Washington in May; and another reason for holding the meeting in Washington is that the representatives of the State Boards may also have an opportunity for conferring with the Senators and Representatives in Congress from their respective States, in regard to national sanitary legislation. It would seem that whenever the health authorities of all the States shall meet, discuss, and agree upon the course they will pursue with respect to yellow fever, cholera, smallpox, or any disease which endangers public health, without regard to State lines or borders, and whenever all State Boards shall act in concert, considerable progress will have been made in solving the problem of what are the best methods for national action in regard to inter-State and maritime quarantine or inspection and disinfection, as well as in the practical control of epidemic diseases within the several States of this country.

Health in Michigan.—Reports to the State Board of Health, for the week ending December 1, 1883, indicate that bronchitis, remittent fever, inflammation of kidney, and puerperal fever have increased, and that typhoid fever, intermittent fever, and dysentery have decreased in area of prevalence.

Compared with the average for the month of November in the preceding six years, remittent fever, consumption, typho-malarial fever, intermittent fever, diphtheria, bronchitis, and typhoid fever were less prevalent in November, 1883.

Including reports by regular observers and others, diphtheria was reported present during the week ending December 1, and since, at seventeen places; scarlet fever at eighteen places; and measles at eight places.

The Medical News *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the News *should be addressed to No. 1004 Walnut Street, Philadelphia.*

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ORIGINAL LECTURES.

INJURIES OF THE HEAD.

A Clinical Lecture,
Delivered at the Hospital of the University of Pennsylvania.

By JOHN ASHHURST, Jr., M.D.,
PROFESSOR OF CLINICAL SURGERY.

Gentlemen: There are in the Hospital at present three cases of injury of the head to which I will call your attention to-day. The subject of head injuries is one of great interest and also of a great deal of importance. With the present cases I will endeavor to illustrate several more or less obscure conditions, and will try to give you a clearer view of their pathology and treatment than you would be able to obtain from your text-books.

Our first case is that of a man who yesterday morning fell from the steps of the Chestnut Street bridge. Immediately after the accident he was brought to the hospital, where, on examination, we found that he had a very severe wound of the scalp. The wound was crescentic or horseshoe-shaped, and the tissues being entirely separated, the flap thus formed was turned over the left side of the head, leaving a considerable portion of bone denuded. We could, however, detect no fracture, though whether there was present or not a fracture of the base we could not positively tell, though as no fissure could be detected passing up into the vault, we thought not, since these fissures almost invariably accompany fracture of the base. In addition to this wound, our patient presented a very interesting constitutional condition, namely, that of shock, from which he was suffering on entering the hospital. Dr. Martin took his temperature when he was admitted and found it considerably below the normal, being but 96° F. In addition to this, there was present another constitutional condition depending on a local trouble, the result of violence done to the brain; the condition known as cerebral concussion.

These conditions of shock and concussion are very often confounded together. Sometimes we see the statement that shock is particularly met with in cases of head-injury; it may, however, not only be found in connection with head injuries, but may be met with in injuries of any part of the body. It is a general condition of the whole system depending on any very severe lesion—of the arm, the leg, the head of course, or abdomen, and many of the worst cases are those of abdominal injury. The symptoms are no doubt manifested through the nervous system, but this is no reason for saying that it is a condition depending entirely on nerve structures. The condition involves all the structures of the body, the digestive organs, the lungs, and the heart as well as the nerves. Concussion of the brain, on the other hand, is exclusively an affection of the brain. We may have other varieties of concussion; for instance, we may have concussion of the nervous centres in the abdominal cavity, more particularly of the solar plexus, which is sometimes occasioned by abdominal injuries. Besides this there is also a condition of the lungs sometimes spoken of as concussion. It is a curious condition, met with where the chest has been violently squeezed, and where, as a result of this, the respiratory functions are almost abolished, the lung not expanding and contracting with the efforts at respiration. It generally passes off in two or three hours. For want of a better name, it has been termed concussion of the lung. It is a condition somewhat analogous to concussion of the brain, but the fact that this term has been used to designate several different conditions has been the source of considerable confusion to the student as well as to the medical practitioner.

The meaning of the term concussion is a shaking. In fact, however, concussion is usually more than a shaking, as we find in every case when there is an opportunity for examination, some lesion; there are no doubt cases where the lesion might not be perceptible, but this does not disprove the presence of a lesion. Almost every one has, at some time, experienced the symptoms of concussion, at least in a mild degree, as the result of some fall or blow which has stunned him; the resulting loss of consciousness, however, passing off in a few seconds. In these conditions there is probably a stasis of the capillary circulation with temporary interruption of cerebral function. Where concussion has a fatal termination it is always attended with definite lesions. In these cases we have a characteristic lesion known as punctiform hemorrhage; a peculiar form of hemorrhage which is different from that met with where the sinuses are ruptured, as also from the hemorrhage found in apoplexy; it is a hemorrhage which has taken place from the minute arteries or capillaries in the form of minute spots or dots; it is distinguished from simple congestion by the fact that we can pick out the points, when we find that they are absolutely clots.

The dividing line between compression and concussion, in books, is frequently very sharply drawn, but it is a difference in degree rather than in kind. We meet with the same lesions in compression as we have in concussion, but the lesions are more severe. In concussion we may also have more profuse hemorrhage, as well as slight laceration of the brain, but these lesions are in most cases repaired in a very short time, and therefore leave no marks perceptible after death. Where, however, death occurs from concussion, there is nearly always some laceration, together with contusion of the brain. Where the injury is carried to a still further extent, we may have compression of the brain. Cases of compression and concussion run into each other, so that some are on the border-line, and no distinction can be made either in the symptoms or as concerns the lesion. The symptoms of the first stage of concussion are relaxation of all the tissues of the body, without, however, necessarily any depression of temperature; there is not an entire obscuration of the mental faculties, but the patient presents rather a slowness or weakness in performing mental actions. The pupils are variable; sometimes dilated, sometimes contracted, sometimes dilatation of one and contraction of the other, or they may respond differently to light; both may be movable, but irregularly movable. There is no very valuable information to be derived from the state of the pupils, though the older writers laid great stress upon their condition, saying that they were dilated in concussion and contracted in compression. When compression is present from any cause, we have complete cessation of the mental functions. The compression may come from hemorrhagic clots as in apoplexy, from bleeding from a ruptured sinus, from a depressed fracture, or from a foreign body in the brain, as in gunshot wounds, or it may be occasioned by a secondary condition—the effusion of serum into the brain, which is known as serous apoplexy, or the formation of an abscess.

The condition of the brain itself in compression is not what probably you imagine it to be. The brain itself is really in a condition of anæmia, contrary to the popular idea, which holds that the brain is very full of blood. There may, of course, be a congestion of the brain, which may ultimately lead to compression; but whenever compression is present, though the vessels may be gorged with blood, the brain-substance itself is in a state of anæmia.

In this case, there are no symptoms of compression; nor is the concussion of such serious aspect as to indicate definite, gross lesion of the brain. When the patient came into the hospital, he was to some degree sensible; he was able to answer questions; he was able to tell how he was hurt, and he made some resisting movements when his head was dressed. Besides this, his position was characteristic of the second stage of concussion—that stage which has been described by Mr. Erichsen as cerebral irritation. He was curled up in bed, lying on his side, not relaxed: this posture is characteristic of the condition in question. The term cerebral irritation seems to me an unnecessary one, as the condition is really but the second stage of concussion. Our patient, then, was lying on his side, curled up, with his members flexed. His mental condition also was characteristic: he was irritable, drawing himself away when touched. This second stage of concussion may last from a few hours to several days, and then gives way to the third stage, when there may be gradual improvement, the third stage terminating in convalescence, or, when the injury has been more serious, we may have a condition of weak-mindedness, with increasing fatuity, and ultimately cerebral softening and death.

When our patient came into the second stage of concussion, he was not in the second stage of shock. As the second stage of shock, we have reaction, often running into a condition of fever, with a form of delirium known as traumatic delirium. This patient passed into the second stage of shock at a later period than that at which he passed into the second stage of concussion. His temperature was not above normal for four or five hours after he had passed from the first to the second stage of concussion. This morning his temperature is nearly normal, while last night it was slightly above normal. He is not going to have a very severe attack of traumatic fever.

He is not entirely rational; there is still some mental obfuscation present; this may, however, be due to the use of alcohol, under the influence of which he appears to have been when the accident occurred. This fact is in these cases always an unknown quantity.

He is doing very well. There was a little hemorrhage from the scalp wound, but this was not very great. It was dressed with the gauze and collodion dressing. We used narrow gauze strips, which have the advantage over strips of adhesive plaster, that they allow the dressing to remain more permanently; they stick better; and have the additional advantage that, by not putting the collodion over the line of the wound, the effused fluids can find their way out without disturbing the dressing. The wound, as you see, began at the median line of the occiput and swept around irregularly to the left temple, being five or six inches long. The hemorrhage occasioned by the scalp wound was controlled by pressure, applied by means of a compress and bandage. Pressure will always control hemorrhage from the scalp. The use of ligatures is not desirable in these cases, not as being dangerous, but simply as being unnecessary; they are also difficult to apply and apt to become detached. The use of sutures, again, cannot be considered dangerous, but it is unnecessary. The older writers considered that, in using ligatures and sutures in the scalp, there was great risk of erysipelas occurring. This I do not consider to be the case; but as we should always avoid doing too much as well as too little, and as the gauze dressing and the simple compress and bandage are sufficient, I think it useless to apply either ligature or suture. Scalp wounds usually unite by adhesion, and we seldom have sloughing. In any scalp wound, no matter how much torn or bruised the tissues may be, we should be careful to keep all the parts and put them into position, and thus we will seldom have any marked loss of substance.

This case has, I hope, served to show you the difference between shock and concussion of the brain, as you see that both or either may be present and run its course without regard to the other; it may also serve to illustrate what I have said in regard to the identity in some respects, and the difference in others, of cerebral concussion and compression.

I have yet two other cases of head injury to show you. This man has been in the hospital since the 13th of September; nearly a month. He was injured while riding on the top of a railroad car, striking his head in passing under the bridge at Paoli. He had a small scalp wound; and, when admitted, there was noticed a peculiarity about his vision—he had diplopia or double vision. After a time it became evident that the patient was suffering from a severe injury of the head, and soon there was noticed ptosis of the left eye, which has now passed off to a great extent, so that it is now rather the right eye which appears prominent, than the left which appears closed. In addition to this, there was slight facial paralysis of the left side, the mouth being drawn to the right. The tongue did not appear to be affected; had it been so, it would have been protruded to the paralyzed side, as the muscles of the tongue are pushing, not pulling, muscles. The paralysis, being all on the left side of the head, pointed to injury of the right side of the brain. We have no positive evidence here of fracture of the skull; but in some of the worst cases of cerebral injury, such as those which have been called "traumatic apoplexy," we have no fracture. This fact of the occurrence of the most severe brain injuries without fracture may be illustrated by a familiar fact, often noticed before the days of the hunting-case watch, that, when the watch sustained a fall, if the crystal broke the mainspring escaped, whereas if the crystal was not broken then the mainspring broke. With the hunting-case, the cover will fly open, and both crystal and spring may be unhurt. The force must be expended somewhere, if not on the outside, then on the inside. Fracture of the base usually results from force applied to the vault—fracture by counter-stroke. The skull is oval, and when force is applied to one surface, having a certain amount of elasticity, the oval changes its shape; the short axis lengthens and the long axis is shortened, and then the skull is thrown into a state of oscillation or vibration; and according to physical laws, a force being applied to the summit, the base of the oval is drawn in by all the force being here concentrated. If the bone is but ordinarily strong and the force sufficiently great, the skull is fractured, and the brain itself may escape with comparatively little injury. If the bone is strong and escapes fracture, then the vibrations are transmitted to the brain itself, and thus we may have a most severe injury produced.

In this case we had evidence of deep-seated injury of the brain. We may have facial paralysis from a blow on the side of the face, affecting the facial nerve or portio dura, but here we had a combination of nerve lesions. The double vision was probably due to disturbance of the optic nerve or tract, and when, in addition to this, we had ptosis or paralysis of the levator palpebræ muscle, which is supplied by the oculomotor nerve, and facial paralysis besides, it is at least most probable that the lesion, involving three distinct nerves, was not of peripheral origin, but centric. Apart from the nervous disturbances, there was no evidence of fracture in this case.

If there is fracture of the middle fossa of the skull, we nearly always have hemorrhage from the ear; we may, of course, have such hemorrhage without a fracture, but where there is profuse hemorrhage continued for some time, and after it ceases, a watery flow, then fracture is very probable, though even then not certain. In almost all these cases the watery fluid is cerebro-spinal fluid. Cases also are on record where there have been fissures in the skull allowing the escape of this fluid. In fractures of the anterior fossa, blood, and afterwards watery fluid, may escape through the nose. In fracture of the anterior fossa there is nasal hemorrhage, but, of course, the hemorrhage may occur from other causes. Again, in fractures of the anterior part of the skull, we have another characteristic symptom, namely, intra-orbital ecchymosis or subconjunctival hemorrhage. This is to be distinguished from the ecchymosis caused by a blow—the "black eye"—by the fact that it does not come on immediately, and is not preceded by palpebral ecchymosis. We may have ecchymosis which, beginning in the eyelid, goes to the conjunctiva in a few days. But if we have subconjunctival hemorrhage coming on two or three days after an injury of the head, and before there has been hemorrhage into the eyelid, the blood has probably come through a fissure of the orbit from the brain. It may, however, be due to a rupture of a vessel in the orbit itself, but then it usually comes on at an earlier period. We have here nothing of this kind, and we have no reason for thinking that there has been any fracture, though we have strong reasons for believing that there has been an injury of the brain itself.

We probably have here to deal with some slight laceration of the brain fibres, with a consequent production of lymph, which by pressure has for the time interfered with the functional activity of the affected nerves. The fact that the paralysis did not come on at first, is the reason for believing that it has been due to the pressure of lymph, and not to a rupture of nerve fibres, as in the latter case we should probably have had the symptoms coming on immediately. The ptosis and the facial paralysis did not come on for several days after the accident. The double vision which occurred immediately was probably due to some of the lesions which I have already spoken of as present in cases of cerebral concussion.

The paralysis of the facial muscles and of the levator palpebræ has gradually passed off, in consequence either of the lymph being absorbed or because the brain has become accustomed to the pressure. The hebetude and dulness from which the patient at first suffered have also passed off.

The treatment which has been adopted in both these cases, and which I commonly employ in cases of head-injury, has been the application of cold to the head, and the administration of calomel and Dover's powder. In the first case we treated the first stage of shock by the application of heat, by means of hot-water cans, to the cold extremities, and by the internal use of ammonium carbonate; five grains every hour. When reaction set in, cold was applied to the head. In these cases small doses of opium produce a calming and soothing effect, in addition to their physiological action of producing anæmia of the brain; the use of opium has therefore a double advantage. The calomel is used for its "anticipatory antiplastic" effect. It has a very great influence over all inflammations of serous membranes. Desault recommended the use of large doses of antimony with the view of producing the same effect; he used enormous quantities of tartar-emetic in cases of head-injury, with the view of preventing inflammation. I have always hesitated to use antimony in this way, nor do I believe that it is called for in these cases, as we can accomplish every purpose by giving minute doses of calomel. In these cases, then, you may advantageously use cold to the head, with calomel and Dover's powder internally, and when there is much headache present, you can afford relief by giving bromide of potassium. Our second patient, in addition to these remedies, has lately been taking quinine to improve his general nutrition. As for food, you may use milk—as much as the patient can take. It does no harm even to give stimulants, if the general condition renders it necessary. The fact to be remembered is that you must maintain the nutrition of the brain, and often your attention or want of attention to this point will make the difference between reparative inflammation and suppurative inflammation of this organ. If your patients are starved in the way persons formerly were in these cases, you need not expect that they will get well. You must then, at the same time that you are giving calomel, keep up the general condition and nutrition of the brain—blowing hot and cold, as it were, together—and thus try to prevent the reparative from passing into the suppurative form of inflammation.

Our third patient is a man, who, last Saturday night, being seven days ago, fell from the Paoli bridge, sustaining, beside a fracture of the radius, an injury of the head. The external wound is a comparatively small affair, but, in addition to this, there is a deeper lesion which may possibly involve the skull itself. There were, when this patient came into the hospital, bruises of the face, with profuse hemorrhage from the nose. Dr. Martin succeeded in controlling the hemorrhage, which then came only from the right nostril, by plugging the anterior naris on that side. This answered the purpose for some time, but on Monday the hemorrhage recurred from both nostrils, when we had recourse to plugging both nares, both anteriorly and posteriorly.

The plugging of the posterior nares may be accomplished by the use of the double canula, but it can be more conveniently accomplished by means of Bellocq's sound, which is introduced through the anterior nares until it reaches back of the soft palate, when the end is made to protrude by means of a curved wire. The end is now threaded in the mouth, the cord carrying at its end a plug which is made to enter the posterior naris by the withdrawal of the sound; then the anterior naris can be plugged from in front. The plugs in the right naris, both anterior and posterior, have become loosened and have been removed; but in the left naris the posterior plug is still in position. We do not want to leave the plug too long, nor yet do we wish to remove it before it becomes loose, since its premature withdrawal might reëxcite the hemorrhage. The patient also presents some cerebral symptoms; he is quite dull and heavy, and has been at times delirious. He has lost much blood and is, in consequence, very anæmic; because of this we have adopted special measures for the keeping up of the heart's action. We are using tincture of digitalis as a cardiac tonic; opium to keep the patient quiet, and ergot to occasion contraction of the capillaries and thus prevent capillary hemorrhage. He gets all the nourishment he can take. The bleeding was so profuse that we feared that it might come from a fracture of the skull at the base of the nose. In some cases the ethmoid bone is extensively fractured, and then there is great risk of meningitis following.

We are using here calomel and Dover's powder, and if there should appear any further symptoms of cerebral disturbance, we should use cold to the head. We did not use cold in the beginning, as the patient had lost so much blood that we wished to avoid anything that might chill him.

There is very little danger in leaving plugs in the nares even for a considerable time. Some surgeons have feared that to do so might expose to risk of blood-poisoning, but there is a comparatively slight risk of this. You must by all means control the hemorrhage, and leave the plugs in until they become loose of themselves. They may become very offensive both to the patient and to those around him; and they have the additional disadvantage that the secretions being swallowed may cause disorder of the digestive functions, but even this is better than a recurrence of the bleeding On the whole, our patient is doing well, and there is no reason why he should not recover.

ORIGINAL ARTICLES.

IMPETIGO CONTAGIOSA: ITS INDIVIDUALITY AND NATURE.

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SINCE the first papers[1] on the subject of this disease, by the late Tilbury Fox, in which its clinical features were so well portrayed and its individuality so forcibly presented, numerous observations of other writers have been added, and the accumulated facts all go to prove the correctness of the views advanced by that distinguished observer.

As with most diseases, this affection presents slight differences as observed in different countries, although in the main and essential points coinciding. English observation,[2] following that of Fox, has corroborated the truth and accuracy of his descriptions.

With the Germans, as described by Kaposi,[3] Simon,[4] Geber,[5] Unna,[6] Riegel,[7] and others, the character of the eruption is the same, but the prodromic constitutional disturbance which, according to Fox, ushers in the eruption is rarely marked, and frequently absent, and the eruption is mostly confined to the face and scalp, sometimes extending to the hands and feet, but rarely to the trunk and limbs. In these cases, however, swelling of the submaxillary glands is occasionally noticed, a symptom, to which scarcely any reference is made by writers of other countries.

In the disease as seen in our country, as described by Taylor,[1] Piffard,[2] Foster,[3] Van Harlingen,[4] and others,[5] the antecedent febrile condition is in most instances so slight as to escape observation; the distribution corresponds to that given by Fox, except that the eruption is usually less abundant.

French references to the disease are scant; not infrequently reference is made to contagious pemphigus, ecthyma, and herpes, which refer, in some instances, probably, to the disease under consideration.

The claims of the disease to individuality are generally recognized, although not universally so. The Germans are the main doubters. Kaposi,[6] the present leader of the Vienna School of Dermatology, has in his late treatise almost completely ignored the disease, mentioning it only to state that the cases giving rise to this name belong most probably, either to the domain of eczema, tinea tricophytina, or pediculosis; this in spite of the fact that he had some years previously not only granted the disease a distinct existence, but also, on account of having discovered a fungus in some of the crusts, had designated it by the new name of "impetigo parasitaria." Geber[7] and Lang[8] are disposed to consider it an unusual form of tinea tricophytina. Unna[9] considers it a distinct disease. Riegel[10] looks upon it as a contagious eczema, and suggests that it should be so named.[11]

Pediculi are, admittedly, capable of producing pustulation, but never the characteristic vesicles, vesico-pustules, and blebs of this disease; nor is it at all probable, even if so capable, that all the lesions would be so uniform, or that in several members of a family they would present the same characters. Then, again, itching is almost a constant sign of pediculosis, and is rarely present in contagious impetigo, nor would there be any probability of the disease being at all a definite one with such a cause acting.

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[1] Fox: On Impetigo Contagiosa or Porrigo; British Medical Journal, 1864, pp. 467, 495, 553, 607. On Contagious Impetigo; Journal of Cutaneous Medicine, October, 1869, p. 231.

[2] Wilson: Journ. of Cutaneous Med., April, 1868, p. 50. Anderson: Diseases of the Skin, London, 1872. Tuckey: Contagious Impetigo; Practitioner, Sept. 1876.

[3] Kaposi: Ueber Impetigo (Faciei) Contagiosa und einen bei derselben gefundenen Pilz. Wien. med. Presse, June 4, 1871.

[4] Simon (Oscar): Fälle von Impetigo Contagiosa; Berlin. klin. Wochenschr., Feb 23, 1873.

[5] Geber: Ueber das Wesen der Impetigo Contagiosa (Fox), oder Parisitaria (Kaposi); Wien. med. Presse, 23 and 24, 1876.

[6] Unna: Ueber die Impetigo Contagiosa (Fox), nebst Bemerkungen über pustulöse und bullöse Hautaffectionen; Vierteljahrschr. f. Dermatol., Wien., 1880, vii.

[7] Riegel: Ueber Impetigo Contagiosa; Berlin. klin. Wochenschr., 1881, xiii.

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[1] Taylor (R. W.): Four Cases of Impetigo Contagiosa; Amer. Journ. Syph. and Derm., Oct. 1871. Clinical Observation on Contagious Impetigo; Boston Med. and Surg. Journ., June 6, 1872.

[2] Piffard: Impetigo Contagiosa: its Parasitic Nature; New York Med. Journ., June, 1872. Impetigo Contagiosa: its Relation to Vaccinia; New York Med. Journ., July, 1872.

[3] Foster: Herpes Contagiosus Varioliformis; Archiv. Derm., Jan. 1875.

[4] Van Harlingen: Impetigo Contagiosa; Med. and Surg. Rep., Sept. 8, 1878.

[5] Fox (G. H.): A Case of Impetigo Contagiosa; Transact. New York Derm. Assoc. Archiv. Dermatol., April, 1877. Stelwagon: Impetigo Contagiosa: Fourteen Cases; The Specialist and Intelligencer, Nov. 1880. Beach: An Epidemic of Impetigo Contagiosa; New York Med. Record, 1883, xxii. p. 63.

[6] Kaposi: Pathologie und Therapie der Hautkrankheiten. Second edition. Vienna and Leipzig, 1883, p. 441.

[7] Loc. cit.

[8] Lang (E.): Ueber Impetigo Contagiosa und ihre Stellung zur Dermato mycosis tonsurans; Wien. med. Presse, 51, 1877.

[9] Loc. cit.

[10] Loc. cit

[11] Lewkowitsch: Ein Beitrag zur Streitfrage der Existenz der Impetigo Contagiosa oder Parasitaria; Jahrb. für Kindh., p. 303, 1877.

Cases in which the eruption is in places confluent, and confined to the face and scalp, do resemble eczema somewhat, but the character of the primary lesions, their maturation, and indisposition to rupture, furnish sufficient grounds against this disease, without taking into consideration the contagious properties of the affection.

Those cases in which the vesico-pustules grow rapidly larger by extension of the peripheral wall give rise to the view that the disease may be an unusual form of tinea circinata. In these cases, Kaposi agrees with the views of Geber and Lang, who, as stated, consider the disease, in all its phases, of the nature of ringworm. Geber, in substantiation of his view, has reported one case in which characteristic patches of ringworm were present, the other lesions being typical of contagious impetigo; the fungus of ringworm was found, and the apparent identity of the two diseases announced. Lang[1] followed with a report of a similar case.

Any impartial observer reading the reports of these cases would have no doubt that instead of one process, there were two distinct diseases present. In a case in which the lesions were all typical of impetigo contagiosa, Geber found a fungus in one of the crusts resembling that found previously by Kaposi, but considered its presence accidental, to which view Kaposi subsequently yielded. It would be extraordinary to have so copious an eruption as is common in this disease from the fungus of tinea tricophytina, in which all the lesions would present characters so uniformly unusual, so extraordinary, I think, as to be impossible. Moreover, with so much eruption, if the disease were ringworm, there should be no difficulty in detecting the fungus; on the contrary, attempts to do this are always negative, except in cases in which, as in those of Geber and Lang, ringworm clearly coexists, and naturally such patches may furnish the characteristic fungus. Admitting the difficulty at times of discovering the fungus in cases of ringworm of the body, and that the same would be true in unusual forms of it, there never is any difficulty in detecting fungous elements in the hairs when the scalp is affected, and this should be true, as Simon suggested, of patches of contagious impetigo in the scalp, were it a form of ringworm; microscopical examinations are, however, without result. Again, patients with impetigo contagiosa, if inoculated with the fungus of ringworm, should, I think, show resulting patches at least somewhat similar to the impetiginous eruption present, as a tendency to an unusual form of an eruption must be dependent upon the state of the skin or condition of the patient or surroundings, rather than upon any condition of the fungus itself. On the contrary, in cases of this disease in which I made the experiment, and in a few of which, as a result, ringworm was produced, the patches were typical, and showed no tendency whatever to the production of a lesion or patch similar to the coexisting eruption of contagious impetigo. In fact, there is neither clinical nor microscopical proof that the disease is in any way related to ringworm.

American observers recognize the individuality of the disease with, to my knowledge, but one exception. Dr. Hyde,[1] in his treatise recently published, regards the disease as a variety or modification of simple impetigo—an impetigo following in the wake of a contagious disease. After describing the clinical history of the disease, and mentioning the fact that it frequently follows a contagious disease, Dr. Hyde says:

> "The natural conclusion seems to me irresistible. Impetigo contagiosa is merely an impetigo which must first, at least, occur in the skin of a patient who has lately suffered from a contagious disease (varicella, variola, vaccinia). The living matter of the pus shares, to a feeble extent, in the activity with which the protoplasmic elements of such a skin were recently endowed. Thus originated, and in this feeble degree inoculable, such a living pus could readily excite the protoplasm of another part of the body or of another individual not convalescent from a contagious disease to a similar activity. Especially should this be demonstrable in the tender and susceptible skin of a child. As regards any differences which have been named above between the features of impetigo in its non-contagious and contagious forms, these are all non-essential, and due to the difference in the activity of the process."

Is the fact, as Dr. Hyde states, that the disease follows a contagious disease correct and sustained by clinical experience? I think not. Among all the reports of cases, in a few instances only did the disease follow varicella, and I can recall no case in which it followed variola, and in only a small proportion of cases did it seem to have any relationship to vaccination. In the eighty eight cases under my care during the past three years and a half, in one only did it follow varicella, in no instance had variola preceded, and in but six did it follow vaccination, and in these a period varying from one month to a year had intervened.

Postponing a further discussion of its possible relationship to vaccination till the subject of the nature of the disease is taken up, and passing to a consideration of other questions raised by Dr. Hyde's theory, the next point suggested is: Can a pustular disease be so modified by a preëxisting contagious disease, which had some time previously occurred, as to present an entirely different clinical picture? I know of no example or proof in substantiation of this. Admitting, however, that such can take place, can such a modification be possessed of such characters as to propagate itself in its own modified form? If so, then there is a new disease, entirely differing from the original disease, and totally distinct and independent. I do not believe, however, that such can take place; clinical observation is against it, and it lacks both positive and negative demonstration. The clinical features of the two diseases are markedly different, and cannot be easily confounded.

If the disease is not a variety or modification of another disease, and its clinical characteristics are so distinct and different from other diseases, the conclusion must be reached that the process is an independent one, and the individuality of the disease must be admitted. This granted, the nature of the disease demands consideration.

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[1] Loc. cit.

[1] Hyde: Diseases of the Skin, p. 186.

In regard to this point but few observers are in accord; some viewing it as a parasitic disease, others opposed to this, and others again holding aloof and advancing no opinion. The eruption has distinct contagious properties; is inoculable, as well as auto-inoculable; to these facts most observers agree. This being the case, this contagion must be derived from a constitutional or local source. The question of the local source of the contagion, or the parasitic view, will be first considered.

Some points regarding the parasitic theory have been unavoidably touched upon in discussing the individuality of the disease, and a certain amount of repetition may be necessary.

Several observers, most notably Kaposi[1] and Piffard,[2] have attributed the disease to the presence of a fungus which they have discovered in some of the crusts. This view is, however, materially weakened at the start by the fact that in almost all instances the discovered fungus has been different from that discovered by others. Almost every observer has, in fact, been able to demonstrate the presence of a fungus in a few crusts, but many look upon it as accidental, a view which Kaposi, one of the first supporters of the fungus theory, subsequently adopted. Others, again, most conspicuously Unna, consider the disease, in all probability, due to a fungus, but admit that as yet the fungus has not been found. No one has been able to demonstrate a fungus in the contents of the lesions.

It is not at all surprising that fungi have been detected in some of the crusts, for it is well known that fungi may float about in the air, and may lodge upon anything exposed. Take the crusts of any disease, the non-parasitic nature of which is unquestioned, and the same result will be obtained. This I have done with the crusts of eczema and dermatitis, and in them I have occasionally found not only the fungus described by Kaposi and Geber, and that found by Piffard, but also fungous elements of other characters. In all, five hundred examinations were made. The same was done with the crusts of impetigo contagiosa, and with about the same results. In numerous examinations of the contents of the lesions, I was never able to detect the slightest trace of a fungus, agreeing in this with the experience of all other observers. The fungi so far discovered in the crusts are, therefore, in all probability, adventitious, and in no way related to the disease. I may here say that not infrequently I have found micrococci in the contents of the *maturing* lesions, suggested by Crocker[3] as a possible cause of the disease, but these are not peculiar to this disease, and may be frequently found in pustules of other diseases.

In a disease with so copious an eruption as commonly observed in this affection, if it were in any way dependent upon a parasitic cause, there should be no difficulty in detecting the same fungus in several of the crusts, even if not in the contents of the lesion. A failure to do this is in itself against the supposition of a parasitic disease.

The aggregate results, therefore, of microscopic investigations of the disease, have been so far negative, and must be accepted as proving more or less conclusively its non-parasitic nature.

This conclusion is supported by the clinical features of the disease: the prodromic febrile disturbance, the character and progress of the eruption, the definite course, are all in opposition to the parasitic view.

The disease occurs mainly among the poorer classes: this has been looked upon as favoring its parasitic nature. It should have, however, but little weight, as all contagious diseases, it matters not what the contagium may be, are always more common among the poor and neglected.

Another view of the eruption, which is nowhere clearly advanced, although its suggestion is occasionally implied, is that which would consider the disease a general systemic one, and the cutaneous phenomena as its manifestations, resembling in this respect the other eruptive diseases—varicella, variola, and the like, and that the eruption is prolonged by auto inoculation. This view is one, I think, which the writings of Fox in a measure suggest, although it is not distinctly so stated. This observer, in discussing the prodromic constitutional symptoms of the disease, says:[1]

"There is clearly an affection of the system at large before the occurrence of any eruption;" and then again: "There was in many instances smart pyrexia accompanying the development of the disease;" and further: "I noticed in the quasi-epidemic of 1870 how completely the definite course of the eruption was marked by the successive cropping-up of fresh places, in part induced by the inoculation from scratching, and also by the fact that the patient scratched open the pustules before the scabbing had taken place, and so prevented their drying and healing up;" and further says: "The natural course of the disease is a short and definite one."

There are several reasons in support of this view. The fact that there is a slight fever before the appearance of an eruption is a good basis for this supposition. That this is frequently absent, or at least so slight as to escape notice, may appear at first thought to antagonize such a view. This, however, occurs frequently in varicella, and occasionally in varioloid, as well as in other such diseases, the constitutional nature of which is unquestioned. Certain it is that the aggregate experience of observers points to the frequent occurrence of prodromic symptoms, or a period of invasion, especially when the disease occurs in young children. Like varicella and others of the eruptive diseases, it is a disease of childhood, and is frequently epidemic, and at times apparently infectious. The disease does not often recur. There is occasional swelling of the submaxillary glands. The disease is markedly contagious, and, moreover, frequently several children are simultaneously attacked, indicating a specific poison.

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[1] Loc. cit.

[2] Loc. cit.

[3] Crocker: On the Contagium of Impetigo Contagiosa; Lancet, 1881, 1, p. 82.

[1] Fox (Tilbury): Skin Diseases. Second American Edition, 1879, p. 224.

All these facts are in favor of the view under consideration.

Ordinarily the disease runs a short and definite course, and the clinical picture of it when this is the case is very characteristic of an acute contagious eruptive disease of a systemic nature, due to a specific poison.

It is only in those cases in which the eruption continues to appear for several weeks or even months that a doubt is thrown upon this view of the disease, and a suspicion aroused that the lesions are due to some external agent. The eruption is, however, auto-inoculable, and this may explain the occasional chronic character of the disease, although, to say the least, the explanation is unsatisfactory.

So far as my observations have gone, I incline to this view of the disease, strengthened as it has been by a careful study of the literature of the subject. This theory will explain the typical cases, and I am willing to accept for the present that. in some instances, the cutaneous manifestations are prolonged by the persistence of the auto-inoculable properties of the lesions after the active and essential disease has run its course: in this manner, new patches may be produced for several weeks, this inherent element of the vesico-pustules becoming gradually weaker, and finally its power to reproduce disappearing.

That this is, however, a correct explanation of the disease I am far from convinced; but if we dismiss the possibility of a parasitic cause (and the collective investigations of the disease certainly demand this), then I can think of no other alternative which will explain the disease as well as this, and which has so many grounds in its support.

As already remarked, the greater number of writers hold aloof, and advance no opinion as to the nature of the disease. Several have suggested that in some way it was related to vaccination, as has already been intimated. Fox himself stated that some cases followed this operation. Piffard[1] and Duhring[2] have seen such instances; Hyde also saw such relationship in some cases. Others have failed to recognize any connection whatever, and in many writings on the disease the question is not discussed, and the inference is that in their cases such relationship was not noticed. As before remarked, in my cases a dependence upon vaccination could not be demonstrated.

In addition to clinical observation, Piffard based this view upon the discovery of a fungus in the vaccine crust resembling that found in the crust of contagious impetigo. The fungus was found in a number of vaccine crusts, but only in several impetigo crusts, a fact suspicious in itself. No fungus could be seen in fresh vaccine lymph. It is probable that if impetigo crusts were exposed to the air as long as vaccine crusts usually are, an examination would disclose the fungus in a greater proportion. Dr. Piffard himself did not, however, consider this proof of a relationship conclusive.

There are several grounds against the supposition that the disease follows vaccination. The disease is commonly observed among the poor, and rarely among the well-to-do. Vaccination, on the other hand, is almost universally practised among the better classes, whereas among the poor it is frequently neglected. This being the case, contagious impetigo should not be so rare among the well-to-do, and so common among the poor; in other words, where vaccination is freely practised, scarcely any cases are observed. Again, the disease should be more prevalent during smallpox epidemics, as then vaccination is more common. A study of the literature of the disease fails to show that this was the case; on the contrary, the reports really prove the reverse.

Another point against it is that not infrequently the disease breaks out simultaneously in several children of a family, only one or two of whom had ever been vaccinated.

With these grounds, and the additional fact that in the mass of cases reported no connection with vaccination was observed, the conclusion is inevitable that no such relationship exists.

In summing up my investigations of the disease, as above detailed, the following results are adduced:

1. It is a separate and distinct disease.
2. It is not parasitic.
3. It is not related in any way to vaccination.
4. It is an acute, contagious, systemic disease (exanthema), with cutaneous manifestations having a definite course, and, in all probability, due to a specific poison.

The first three deductions are, I think, well founded; the fourth is merely suggestive.

TWO CASES OF PARACENTESIS OF THE THORAX;

WITH THE UNUSUAL COEXISTENCE OF PNEUMOTHORAX, NOT TRAUMATIC IN ONE, AND PLEURITIC FRICTION SOUNDS FOLLOWING THE OPERATION IN BOTH CASES; WITH REMARKS AND DEDUCTIONS.

BY F. PEYRE PORCHER M.D.,
PHYSICIAN IN CHARGE MEDICAL WARDS, CITY HOSPITAL, CHARLESTON.

(*Read before the Medical Society of South Carolina, October, 1883.*)

I HAVE recently had occasion in my service at the City Hospital to withdraw by the aspirator three pints of sero-albuminous fluid, of a pale straw-color from Mrs. M., a white woman, æt. 61, who was supposed to be suffering from phthisis. I found partial dulness at the base of the left thorax anteriorly and posteriorly, with absolute dulness in the right cavity up to the nipple.

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[1] Loc. cit.

[2] Duhring: Diseases of the Skin. Third edition. 1882, p. 298.

The needle of the aspirator was inserted July 6th, at a point three and a half inches below the lower border of the scapula, when a portion of the fluid was withdrawn. Three days subsequently the needle was made to enter over a dull area between the sixth and seventh ribs a little anterior to the middle axillary space, when the removal of an additional quantity of fluid rewarded our efforts.

The patient, before the operation, had been compelled to maintain the upright position day and night on account of dyspnœa, which symptom was entirely relieved, and though there is still some dulness at the base of the right lung posteriorly, she is perfectly comfortable. Two weeks after the operation pleuritic friction sounds could be distinctly heard—consequent upon the contact of the pulmonary and costal pleural surfaces. At the present writing, August 21st, there is not the slightest disturbance as regards her chest. She only suffers from a singular tendency to cutaneous hemorrhage from a scratch or a mosquito-bite, or any other irritant acting upon the surface of the body. At an examination made October 1st, some friction sounds could still be heard, but no fluid existed. The accentuation of the pulmonary second sound was still marked.

It has been my invariable rule in operations for paracentesis of the chest-walls, including two for removal of fluid from the pericardium and one from the lungs, to use the hypodermic syringe with a fine needle as a suction instrument to *test* for the presence of fluid. After the point of the needle has been inserted beneath the skin, the piston is drawn back and a vacuum is created, so that immediately as any fluid is reached it is drawn up into the body of the instrument and its existence made known. Then recourse is had to the aspirator. I make such innocuous searches for fluid in almost every region of the body, deadening the sensation of pain by a spray of ether, or the direct application for a half-minute of a smooth bit of ice. Dr. Douglass Purcell (*London Medical Record*) recommends that the ice should be previously dipped in salt.

To show, furthermore, the necessity for *searching* for the existence of pleuritic effusion in persons who are unconscious of its existence, I report the fact that I have to-day used the hypodermic needle in a man who has been up for three weeks, and obtained some fluid by a puncture in the right middle axillary space, and judging from the extent of the dulness, I confidently expect at my next visit to withdraw two or more quarts for the relief of a state of inactivity and "a heavy feeling about his chest"—the only complaints he makes.

CASE II.—Mr. B., white, æt. 44, has been sick five months, during three of which an inmate of the hospital, suffering from Bright's disease with anasarca. I learn since that his illness began with a severe cold, accompanied by pain in the side; and I may remark here that many diseases of the chest ascribed to tuberculosis will be found upon closer examination to have been caused by previous attacks of pneumonia or pleuro-pneumonia; and the prognosis is then always more favorable. Upon a chemical and microscopical examination of his urine, a very moderate amount of albumen—one-fortieth of a test-tube—was found, and many broken tube casts. There was marked intensification of the second sound at the base of the heart. After careful additional examination (July 16, 1883), I discovered that he also had a large quantity of fluid in the thoracic cavity. My colleague, Prof. M. Michel, Drs. M. Simons, Thomas Legare, my son, W. P. Porcher and the house physicians being present, the needle of the aspirator was entered at the back of the left lung, three inches below the scapula, and one pint of fluid obtained. Two measured pints were then drawn from the base of the right lung, the needle being inserted at a point between the ninth and tenth ribs, intermediate between the lower axillary space and the lower border of the scapula. The pale, serous fluid obtained from each side was slightly different in color.

Relief from pain and dyspnœa and diminished swelling of the feet followed the removal of so large a quantity of fluid, which had, of course, interfered materially with the important organs in the thorax. The tendency of pleuritic effusions is to invade the pericardial sac, and, if allowed to remain, they impede absorption throughout the body.

Dr. F. P. Henry, in presenting a case of Bright's disease to the Pathological Society of Philadelphia (THE MEDICAL NEWS, August 2, 1883), stated that the cause of death was œdema of the lungs, which is a common event in this disease; and he urges the important point that the pleural cavity may serve as an outlet for effusions, "which, but for its presence, would infiltrate the lung parenchyma, . . . and that œdema of the lung may perhaps be averted by the timely performance of paracentesis."

He urges that any cause which interfered with a proper expansion of the thorax would lead to congestion of the pulmonary capillaries, thereby favoring pleural effusion.

A few days subsequently, with the especial object of ascertaining whether friction sounds would not be discovered as a result of the operation, as in the preceding case, I found exceedingly well-marked rubbing sounds at points in the left chest between the heart and the middle axillary space. These sounds, listened to by several friends, persisted for several days: they were so exaggerated as almost to be confounded with the rustle of the clothing, and more distinct than any I have ever heard.

This case presented an additional point of interest, which has surpassed everything in my previous experience in hospital or private practice. This was the escape of an enormous amount of air from both sides of the thorax, which passed into the reservoir of the aspirator with the fluid. The presence of a certain amount of crepitation had been noted previous to the operation, but there had been no very marked resonance upon percussion. When we remember that there was never any traumatism, no previous injury to the ribs or chest, and that the possibility of the existence of idiopathic pneumothorax has been widely denied, this case gives a striking refutation to such denial. I have also been enabled in this instance, as well as in several other persons examined for the purpose, to confirm an observation recently reported in The American Journal of the Medical Sciences—*i. e.*, the coexistence of intensification of the second sound at the base of the heart consequent upon the presence of peritoneal fluid, gall-stones, concretions, ovarian cysts, or whatever else produces obstruction in the liver and interferes with the due discharge of blood through the ascending vena cava. As one of the writers expresses it: "There is an ischæmia of the portal and hepatic, and a hyperæmia of the pulmonary system."

Such obstructions (and this man's abdomen was distended by fluid) influence the cardio-pulmonary circulation; the right side of the heart is engorged; owing to the compression, the diaphragm becomes fixed, the lungs cannot expand freely and express their contained blood, hence the flow of blood through the pulmonary artery is impeded. There is revealed at the tricuspid orifice a prolonged first sound and a regurgitant murmur, and the second sound is accentuated over the pulmonary orifice, owing to increased arterial tension in the pulmonary circulation. It is purely mechanical, and occurs even in pregnancy. See papers by Dr. Passerini, in *Gazz. degli Ospitali*, January 3, 1883; also Barié, in *Revue de Médicine*, February, 1883; in *English Practitioner*, August, 1883. The condition of the right cavities of the heart, as seen at the autopsy which we will presently relate, serves to confirm the explanation.

According to some authorities, including Hoppe, intensification of the pulmonary artery second sound at the base was often otherwise explained, indicating, for example, a diseased condition of the left ventricle, markedly of the mitral valve. Dr. E. Hyla Greves states, in the *Liverpool Medico-Chirurg. Journal* for July, 1883, "that the pulmonary second sound is accentuated in cases of chlorosis also, and indicates increased tension in the pulmonary artery." On the other hand, there can be a true cirrhosis of the liver of cardiac origin (M. Ch. Sabourin, 1883).

Mr. B. died August 18. The accumulation of fluid in the abdomen having largely increased, he was tapped, at my request, by the house physician, Dr. I. O. Cobb, two days before his death, and three gallons of serous fluid removed.

At the post-mortem examination, made by the house physician, two or three quarts of fluid were found remaining in the cavity of the thorax, and a small amount in the pericardial sac. There was great hypertrophy of the heart. The left ventricle was very much hypertrophied, the walls over an inch in thickness; the right ventricle was also hypertrophied. The right auricle was very much distended, the left normal. The aortic valve was normal, the mitral being slightly insufficient, with great development of the fleshy columns of the valves, as the specimen exhibits. The lungs were congested and condensed by the pressure of the circumambient fluid, adhesions and pleural bands existing. The fluid was becoming denser, approaching to an empyæmatic condition. The kidneys were somewhat enlarged, red, granular, and nodulated, with the capsules adherent; on cutting into them, some of the pyramids were found to be destroyed. The liver was enlarged.

It is a regret that I did not use earlier and more frequent operations for the removal of the serous fluid in both chest and abdomen. I think that morbid accumulations should be carefully searched for and more frequently and earlier withdrawn.

Dr. Bouveret (*Lyon Médical*, 1883) has noticed an ascites among alcoholists curable by tapping. He brings these cases in relation "with the ascites which Murchison has reported as accompanying hepatic congestion, and Semmola has found to exist in certain cases of interstitial hepatitis, and, finally, with the ascites found in chronic peritonitis by Leudet and Lancereux." Differential diagnosis, he adds, is impossible, and only the progress of the affection can throw light on the nature of the ascites.

I regard paracentesis as often only palliative of pain and disease, yet that it is essential as such. I have had one case of perfect recovery from ascites where the patient was also put on sulphate of copper as a tonic; and in a second case, the man from whose abdomen five measured gallons were drawn was at his work five months afterwards.

In the case of a man with Bright's disease, of cardiac origin, seen with Dr. R. A. Brodie, of this city, and tapped six times, with the removal of more than two gallons in several instances, he has recently walked more than two miles, after having been confined to his room for months, and often compelled to sit up in his chair night and day.

In conclusion, I will relate two unique cases, indicating the necessity for paracentesis, but in neither of which, unfortunately, was the operation performed.

In an autopsy—made within the past few days—of a man with serous fluid in the lungs accompanying great enlargement of the liver, insufficiency of the mitral valves having been diagnosticated, a fibrous mass the size of a bullet was found imbedded in one of the fleshy columns of the mitral. A singular incident occurred in connection with this case: Whilst the muscles of the thorax were being divided, but before the cavity of the chest was opened, a large quantity of fluid was seen to flow in a continuous stream from the mouth of the corpse. This phenomenon was never before witnessed by any one present, including Prof. Michel, who assisted. It could only be accounted for by an accidental communication being forced between the superabundant fluid in the chest into the trachea, though no opening could be discovered.

In another case, which I had occasion to publish during the past year in connection with reports of several cases of paracentesis thoracis, a gardener, who had been in the habit of lying out in the open air, and who was admitted into the hospital suffering from great oppression, pleuritic effusion being diagnosticated, paracentesis was proposed, but the patient refused. Spontaneous rupture through the bronchial tubes from gangrene of the lungs occurred during the night, and the man was suffocated in ten minutes by the deluge of fluid from the pleural cavity.

A CASE OF POISONING BY TURPETH MINERAL; DEATH.

BY A. McPHEDRAN, M.B.,
OF TORONTO, CANADA.

I AM not aware that any instance of poisoning by the yellow sulphate of mercury has been published, or that such a result has ever before occurred from its administration, and deem it, therefore, a duty to report the following case. A medicine that has been so unreservedly commended by so high an authority as Dr. Fordyce Barker, of New York, must be used by many practitioners in both the United States and Canada. Should it occasionally miscarry with even less disastrous results than in the case given below, it is very desirable that such a fact be known to the profession generally, that due caution may be exercised in its administration.

I was consulted in August of last year by a woman for her child, aged five months, on account of a croupy cough which had begun two days before, and was growing worse. There were symptoms occasionally of slight spasm of the larynx, and the mother was apprehensive of "croup." The cough was due to a slight catarrh of the larynx and trachea, with pretty free secretion. The child was healthy and well nourished, though small. Fearing an attack of dyspnœa during the night from spasm of the larynx, it was thought advisable to be prepared to give an emetic, and two powders, three grains each, of turpeth mineral, were ordered, with directions that one should be given as soon as an attack of spasm threatened. The second powder was directed to be given in fifteen minutes if the first failed to produce vomiting. No doubt, however, was entertained of the prompt action of the first powder.

During the night, the mother thought it necessary to make the child vomit, and gave one powder, a little of which was not swallowed, but returned mixed with saliva, so that probably about two grains were taken. A few minutes afterwards, the child seemed greatly distressed, and made fruitless efforts to vomit. The second powder was given in a quarter of an hour, but only increased the suffering without producing emesis.

I was immediately sent for, and, on my arrival, found the child in great agony. The tongue was slightly whitened, and the throat filled with mucus. Shortly afterwards the bowels began to move. The first motion was of normal consistence and dark-yellow color; the subsequent ones consisted of white, coagulated mucus and watery fluid, in which at first could frequently be seen light, yellow particles, which probably consisted of turpeth mineral. The evacuations were very frequent, and soon became almost continuous. The child could swallow nothing, so that little could be done to give relief. An enema was given, but it returned immediately. After about two hours, collapse began to set in. The pain came in paroxysms, during which there were efforts to vomit. The collapse gradually increased, and death took place in eleven hours, with signs of slight convulsions.

These symptoms are identical with those due to acute poisoning by the perchloride of mercury. The lemon-yellow color of the powder precludes the possibility of its being other than the yellow sulphate. A short time previously I prescribed this emetic for diphtheritic laryngitis in a child under two years old. The prescription was filled from the same bottle of the medicine as was used to fill the order in the above case. In that case, four and a half grain doses were given, and each dose caused prompt, easy emesis without any perceptible depression following its action. Full doses were ordered in each case, in the expectation that the most prompt action would be obtained without any increase in the depressing effects. I was led to give the preference to turpeth mineral for the infant from observing how perfectly it met all the requirements of an emetic in the case of the child. My friend, Dr. Cameron, of this city, has since had similar experience with this medicine. He ordered it for a child, and the first dose not producing emesis, a second was given. This also failed to accomplish the object aimed at, but a severe diarrhœa was produced, which terminated fatally.

MEDICAL PROGRESS.

NEPHRECTOMY.—On November 13th DR. RICHARD DAVY removed, by post-peritoneal incision, a large fibro-cystic kidney from a man aged 53. The albuminous urine has ceased since the day of operation, and the patient is doing well. On November 14th Mr. Knowsley Thornton performed nephrectomy by abdominal section on a young woman at the Samaritan Free Hospital, a tuberculous kidney being removed. The abdominal incision was made external to the rectus muscle, as Langenbuch recommends, and, after a principle introduced by the operator, the cut surface of the distal part of the ureter was fixed outside the abdominal wound. The patient is progressing very favorably. This is the sixth case of nephrectomy performed by the same operator; all the patients have recovered, and in every case the strictest antiseptic precautions were employed. A very complete account of the history of surgical operations upon the kidney will be found in the contributions of Mr. Clement Lucas and Dr. W. Walter to the Surgical Section at the recent annual meeting of the Association, together with the subsequent discussion, published in the *Journal*, September 29, 1883.—*British Med. Journ.*, Nov. 24, 1883.

EROSION OF THE INTERNAL CAROTID FROM CARIES OF THE PETROUS BONE.—DR. HESSLER reports a case in which sudden death from profuse hemorrhage from the mouth, nose, and ears, was occasioned by caries of the tympanic cavity causing erosion of the internal carotid. Reference to the literature of the subject shows that other similar cases have been reported. The accident seems to be especially likely to occur in these cases on account of the close relation of the internal carotid to the petrous portion of the temporal bone. The hemorrhage is generally sudden and fatal, and without prodromal symptoms. It may be brought on by a paroxysm of cough.

The prognosis is, of course, very unfavorable, the patient bleeding to death before assistance can be rendered. The only treatment is compression and ligature of the common carotid. Even then hemorrhage may occur from a return current through the anastomosis with the vertebral and the cerebral anastomoses.—*Deutsche Med. Wochenschr.*, August 22, 1883.

Treatment of Fistulæ of Steno's Duct.—Dr. Edouard Martin has recently published a clinical study of this affection, in which he draws the following conclusions:

1. From an etiological point of view, fistulæ of Steno's duct may be classified almost equally as traumatic fistulæ, and pathological fistulæ following abscess and inflammation.

2. Their treatment varies a great deal according to the indications; it is therefore a grave error to choose any one procedure to the exclusion of all others for a distinct application in these cases.

When the anterior extremity of the canal is permeable, cauterization, aided in some cases by dilatation, may effect a cure. When the anterior extremity is closed, it is necessary either to produce glandular atrophy by compression, or by evacuating the saliva externally, a procedure not without inconveniences, though it has given good results in the hands of Louis, Borel, and Julliard, or else to make an artificial duct. For this purpose Martin believes that simple puncture with a large trocar, followed by the introduction of a large drain left *in situ* for a few days, is sufficient in the majority of cases to insure the permeability of the artificial duct. Should this show a tendency to close up, a canulated sound may be passed, or the duct may be dilated by laminaria. Deguise's method of double puncture, with Béclard's, Gosselin's, Trélot's, or Richelot's modifications, should be reserved for exceptional cases.—*Revue de Thérap.*, Nov. 1, 1883.

Treatment of Epithelial Tumors by Arsenical Paste.—M. Garès (*Thèse de Paris*, 1883) recommends the method employed by Laboulbène. The paste is made as follows: ℞.—Arsenious acid, 1 part; sulphate of mercury, 3 parts; calcined sponge, 6 parts; add water sufficient to make a soft paste. After a little ammonia has been applied to the surface of the tumor, a small quantity of the paste is applied; the quantity to be applied varies according to the dimensions of the tumor. The paste is applied by means of a piece of tinder, and secured. There is generally some pain, but not sufficient to cause serious inconvenience until the second day. After a time varying from four to six days, the tumor becomes detached and falls off, leaving a wound which soon begins to cicatrize. The chief advantage of this paste lies in its elective properties, pursuing the ramifications of an epithelioma in a remarkable manner.—*Revue de Thérap.*, Dec. 1, 1883.

Actinomycosis Hominis.—Middeldorpf reports a case of actinomycosis hominis seen at the Freiburg Surgical Clinic. The patient was thirty-five years old; had had symptoms of peritonitis in July, 1882. Then two pelvic abscesses formed, which, when opened, discharged characteristic actinomycoses. In the course of time a gluteal abscess formed, a communication existed between the abscess-opening and the intestine, and later a communication between the intestine and urinary passages. The treatment was symptomatic and the patient recovered. The reported cases of actinomycosis amount to twenty-three.—*Centralbl. f. Chir.*, Nov. 3, 1883.

Chyluria, with Casein in the Urine.—Dr. A. Loison reports the case of a woman affected with chyluria. The amount of fat varied between grammes 3.25 to 4.11 per litre of urine. The density of the urine was normal. Microscopic examination showed the presence of numerous fatty globules, granular masses of precipitated urocasein, and fibrinous clots as large as the head of a pin, and containing blood-globules.

The caseous material which M. Loison called urocasein was precipitable by acetic acid, the precipitant being soluble in ammonia and in the alkaline carbonates, phosphates, borates, and bicarbonates. When dissolved in bicarbonate of soda this material was precipitated by sulphate of magnesia. The alkaline solutions are precipitable by acetic and lactic acids, and by tartaric acid (an excess of this last material redissolves the precipitate).

In an alkaline solution it is precipitated by alcohol, heat redissolving the precipitate. Elementary analysis shows that this casein is analogous to milk casein.—*Ann. des Mal. des Organes Genito-Urinaires*, November, 1883.

Prognosis of Resection of the Vagus.—A. Vogel reports three cases of resection of the vagus.

The first case was one of extirpation of carcinomatous glands in the neck, during which one and one-fifth inch of the left internal jugular and two inches of the left vagus were resected. It was rather remarkable that the left recurrent was not affected until nine days after the operation. Up to this time the voice was loud and clear; then total paralysis of the left vocal chord came on. Vogel thinks that there must have been an anastomotic connection between the right vagus and the left superior laryngeal.

The second case was one of partial extirpation of the larynx, a portion of internal jugular, three and one-fifth inches of the common carotid, and large pieces of the vagus, sympathetic, and hypoglossal nerves. Death occurred ten hours after the operation, from loss of blood.

The third case was one of lympho-sarcoma of the neck; extirpation with resection of the right vagus, a part of the cervical plexus, section of the sympathetic, ligation of the internal jugular and subclavian veins, and vertebral and subclavian arteries. Death occurred in four days from loss of blood. As far as paralytic accidents are concerned, the operation does not seem to be contra-indicated.—*Centralbl. f. Chir.*, November 24, 1883.

The Effect of the Metallic Chlorides on Microbes.—M. Ch. Richet has recently made some experimental studies on this subject.

He used, as a fermentable liquid, sea-water to which a small quantity of pepsin had been added. This liquid is, in a few hours, filled with bacteria. In comparing the metals which, in the state of chlorides, prevented the development of bacteria for forty-eight hours, M. Richet discovered that twenty times as much of the chloride was needed, as was necessary to endanger the lives of fishes.

Mercury has the most powerful action; after this are zinc, cadmium, and copper. Ammonium and potassium, which are energetic animal poisons, have no effect on plants. It is probable that this difference depends on the nervous system, upon which the salts of ammonium and potash are toxic. There are then universal poisons, of which mercury and zinc are the types acting on the entire organism; and poisons of the nervous system.—*Revue Scientifique*, Nov. 10, 1883.

Scarlatinoid Disease.—In his annual report on the condition of the Combined Gloucestershire District for the year 1882, Dr. Francis Bond, the Medical Officer of Health for the district, explains at some length his reasons for classing the mortality from scarlatina, diphtheria, and croup under the head of scarlatinoid disease. It is not, he observes, that typical scarlatina and typical diphtheria are diseases which can be confounded with one another by any person who has once seen examples of them, but that there is so much practical confusion in the intermediate links by which these separable types are connected with one another, and in the tendency both of the profession and the public to call cases of severe sore-throat "diphtheria," though the scarlatinoid nature of such cases is often not difficult to recognize when searched for, that he sees no alternative but to group them under one head, believing them all to have a more or less intimate family relationship to one another in origin, pathology, and sanitary importance. In illustration, Dr. Bond quotes the case of an outbreak which took place at the close of last year, in the parish of Westbury-on-Severn, where upwards of forty children were suddenly smitten by an attack, the precise nature of which it was by no means easy to identify. The only invariable symptom was a more or less congested condition of the throat and tonsils, accompanied in several cases with localized ulcerations, and very rarely with anything like true diphtheritic exudation, though with occasional croupy tone of voice. Had he seen the latter samples of the affection alone, Dr. Bond would have classified them as croup; had he seen those only in which there was a tendency to exudative deposit on the tongue and fauces, he would have been inclined to admit the diagnosis of a medical friend who saw them with him, and who pronounced them diphtheritic. But the absence in the majority of the cases of the characteristic symptoms of specific diphtheria, the presence in the district of unquestionable scarlatina, the want of any conditions to explain an outbreak of specific diphtheria, and the existence about the same time of similar ambiguous cases of the same kind in other parts of the district, all pointed to the conclusion that this was an aberrant and ill-developed form of scarlatina, modified to some extent by obscure local or personal influences. Enlarged experience tends, Dr. Bond says, to confirm in his mind the belief that, though scarlatina generally originates from direct personal infection, and though typical diphtheria often has a purely local origin, these diseases are due to an infection which in all cases attacks the throat, propagates itself mainly from the throat, and which may, in passing from one person to another, undergo such modifications as will give rise in one case to a characteristic outbreak of scarlatina, in another to an equally characteristic attack of diphtheria, and in a third to a mongrel type of affection which it is difficult to refer dogmatically to either of these diseases, or identify by any other name than bad sore-throat, and which is, in fact, a connecting link between them. Practically, the outcome of this view is, he thinks, to observe with the greatest suspicion any case of sore-throat, more especially in young persons, and to assume that it is scarlatinoid in nature unless good reason can be shown for regarding it otherwise.—*Med. Times and Gazette*, Nov. 17, 1883.

Lupus of the Larynx.—A paper on this subject, by MM. Chiari and Riehl, appears in the *Vierteljahrs. f. Dermatol. u. Syphilis*, 1882, page 663, and *Centralbl. f. klin. Med.*, No. 41, 1883. A review of the present literature of the subject goes to prove that the absolute diagnosis of the condition is only to be made when some affection of the skin accompanies it, and when the possibility of syphilis, tubercle, and carcinoma can be excluded with certainty. Of sixty-eight cases (twenty-six males and forty-two females, all suffering from lupus of the skin or of various mucous membranes) investigated by the authors, only six could be definitely diagnosed as lupus of the larynx. The following appears to be the most usual mode of onset. Small excrescences of the size of hemp-seeds, some isolated and others in groups, appear upon the epiglottis, and, later, upon the ary-epiglottic folds. Similar outgrowths may form on the vocal cords, or may even extend into the trachea. These nodules are seated upon a slightly hyperæmic mucous membrane, and tend to increase both in prominence and in superficial area. They may end in resolution, a slight scabbing taking place, followed by cicatrization, with shallow depressions of the mucous membrane; or ulceration may occur, of very long duration, often accompanied by glandular swellings in the neck, and leading to deep cicatrices, in which fresh nodules are very prone to recur. Unlike lupus of the nose, there appears to be but little tendency for laryngeal lupus to attack the cartilaginous structures. The symptoms, of necessity, depend upon the part of the larynx invaded. Women would appear to be more liable to the affection than men. Scrofulous or tuberculous diatheses do not seem to have any influence either upon the origin or the course of the disease. From tubercular disease of the larynx it differs in its proneness to attack the epiglottis, and thence to spread downwards, and in the scarring about the healed nodules or ulcers. From carcinoma it is distinguished by the absence of the cachexia and by the age of the patient, and further, by its tendency to disintegration rather than proliferation. The differential diagnosis from the syphilitic affections is less easy. The character of the ulcers themselves forms the most marked point of distinction; the sharply defined rounded edge, and the surface covered with yellowish secretion peculiar to the syphilitic ulcers, will often serve to determine their nature. In some cases, however, the course of the disease and its amenability to treatment are the only means of coming to a correct diagnosis. The prognosis must invariably be very guarded. Complications such as perichondritis or even stenosis of the trachea have been observed, although only in a very small proportion of the cases. Treatment must be general, especially by cod-liver oil, and local, by caustic remedies such as iodoform or nitrate of silver.—*Medical Times and Gazette*, November 10, 1883.

Turpentine in Diphtheria.—The antiseptic treatment of diphtheria by turpentine has recently been introduced in Germany by Bosse, of Domian. It is given in the same manner as in cases of phosphorus poisoning, that is to say, as pure turpentine, highly rectified, in doses of a soup-spoonful twice a day to adults, a dessertspoonful to children of more than five years of age, and a teaspoonful to young infants. Milk and wine are given abundantly at the same time. The administration of it causes a sensation of burning in the stomach, epigastric pressure, vomiting, and the passage of stools strongly impregnated with turpentine odor.

This use of turpentine was suggested by the experiments of Koch, which showed that it had an action on the problematic bacilli of diphtheria. But the treatment itself is much more than problematic.—*L'Union Méd.*, November 20, 1883.

Bismuth as an Antiseptic.—Kocher has recently published a further observation in favor of the antiseptic use of bismuth.

The patient was a small boy, who was brought to the hospital at Berne, early in October, on account of a wound from a firearm. The ball had penetrated the abdominal cavity, perforating the cartilages of the seventh and eighth ribs and the wall of the stomach, which was distended with food, the latter being extravasated into the peritoneal cavity. Laparotomy was performed, and the wound brought together by a catgut suture, being completed by a fine silk suture. The peritoneal cavity was disinfected with a solution of subnitrate of bismuth, two per cent. Six days afterwards, the sutures were removed, and twenty days later the patient was well.—*L'Union Méd.*, November 20, 1883.

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SATURDAY, DECEMBER 22, 1883.

THE DWIGHT LIFE INSURANCE CASE.

FOR several weeks, public attention has been attracted in an unusual degree, to the Dwight Life Insurance Case, proceeding at Norwich, New York. The prominence of the citizen, whose death involved a large sum of money, the mystery surrounding the dying man's last moments, the supposition on the one hand of fraud, and the fatality of the events as believed on the other, have combined to awaken the keenest interest on the part of the medical profession and the public. The secular press having supplied the material to satisfy the curiosity of the public, as medical journalists, we have now to place before our readers the medical aspects of this remarkable medico-legal investigation.

The late Col. Dwight, of Binghamton, New York, a few months before his death, secured policies on his life, in various companies, aggregating upwards of three hundred thousand dollars. Having recently been discharged from his debts under the existing Bankrupt Act, Dwight was unprovided with the means to pay the premiums on his policies, and hence made an arrangement for quarterly instalments. He had paid one quarter only when he died. His death was peculiarly timely. The proceedings in bankruptcy had just been concluded, and in a few days the second quarterly instalment of the annual premium would come due. Various circumstances connected with Dwight's illness and death were peculiar, the will, which disposed of the insurance money, is a remarkable document, and the numerous beneficiaries under the will appear to have been selected for the testator's bounty with other than merely friendly interest: hence it can hardly be surprising that the insurance companies suspected fraud, and resisted payment of the insurance money. The executors of Dwight brought suit to compel payment, and hence the legal contest which has just terminated by the defeat of the insurance companies.

There are several medical and medico-legal questions connected with the case which cannot fail to interest our readers. Dwight was, in some respects, a remarkable man; his malady was obscure; the cause of death was involved in much doubt, notwithstanding an autopsy was held. The trial developed many singular opinions on the part of witnesses to fact, and also on the part of the experts. To present an intelligible view of the case, it is necessary to clear the ground by some preliminary statements.

Dwight was forty-one years of age, six feet two inches in height, and weighed, when in health, two hundred and twenty pounds; he had, moreover, immense strength, activity, and endurance, and he possessed many of the moral qualities of "Col. Sellers." After very harassing pecuniary troubles, ended in the bankrupt court, he was greatly fatigued and much exposed on a hunting expedition which immediately followed. He fell sick, and the symptoms, as given by Dr. Burr, his physician, were "sleeplessness, entire want of appetite, loathing of food, vomiting frequently of contents of stomach—mostly drinks that he had taken." He then improved, and on November 1st was reported as "dressed and sitting up." The next day, on rising to open the door of his room, he "suddenly became faint, and fell back on his bed unconscious. The symptoms were those of a congestive chill. Stimulants and other restoratives were employed, and in the course of an hour he was able to speak." As there is no evidence of fever present at any time, this theory of a pernicious intermittent seems strangely at variance with this fact, and no less irreconcilable with subsequent developments.

On the 9th of November, or one week after this, Dr. Burr reported the onset of the "expected chill," but he says, "we prepared for it yesterday, and late in the evening administered Magendie's solution of morphia, both internally and hypodermically." "The doses of morphia were renewed at two o'clock A. M.," as some pain had occurred. The second paroxysm of the supposed pernicious intermittent, was not attended with more characteristic symptoms than had been witnessed in the first. Some depression of the powers of life came on after the "preparations" to prevent it had been made, but the symptom of chief importance, for the relief of which morphine in repeated doses had been given, was severe pain in the hypochondriac regions.

After this Dwight again improved, and on the 16th of November, the day of his death, he was "very comfortable," according to Dr. Burr, and expressed himself in the evening of the same day as feeling "unusually comfortable." During this day large doses of Magendie's solution of morphine were administered—one of these doses being one drachm of the solution, or two grains—and at 9 P.M., an amount, which was not definitely remembered, was given subcutaneously. Not less than three grains, certainly, had been taken during the day and evening, some portion of it hypodermatically. It is stated that morphine had been given freely during his illness to procure sleep—the more freely, since Dwight, whilst not an opium *habitué*, was extremely insusceptible to its action. On those days when the "congestive chills" were expected, and to procure sleep on the night previous to the first fainting fit, he received large doses of morphine.

Notwithstanding the statement which we find in the report of Dr. Delafield, made to the Insurance Company, that "no poisonous symptoms were produced" by the large doses of morphine, it is certain that the pulmonary and circulatory systems were characteristically affected. All the world knows that morphine in full doses, especially when given subcutaneously, is a vascular sedative. It is this power which renders it so valuable an agent in acute serous inflammations. The sedative action is made up of two effects; lessened activity of the cardiac-motor ganglia; contraction of the peripheral arterioles. Fluid extract of gelsemium had also been given during the last two weeks of Dwight's life—a practice which necessarily increased the cardiac depression. There were conditions developed at the autopsy which rendered this treatment peculiarly hazardous.

Dr. Delafield, who made the first post-mortem examination, found changes in the intestinal glandular apparatus and in the spleen, indicative of the prodromal stage of typhoid, and the heart was small and its muscular tissue "somewhat degenerated." The post-mortem also disclosed chronic pachymeningitis, and a small hemorrhagic extravasation in connection therewith. The opinion of Dr. Delafield as to the mode of dying seems to us wholly sound. The attacks supposed to be congestive chills, he says, "were due to sudden feebleness of the heart; in the second attack, the heart ceased to act." In this result the agency of the morphine is obvious. Although Dwight's brain was rather insusceptible to the narcotic impression, the heart was in a condition to be depressed by the enormous doses required to force sleep. In the words of Dr. Burr, "he suddenly without any premonition sank away and died."

The question of suicide entered largely into the theory of the mode of dying adopted by the experts and the counsel for the insurance companies. Before we consider the means by which Dwight was supposed to effect his purpose, we must dispose of the influence which certain moral questions and personal characteristics had in determining his actions. The reason he had for taking so great an amount of insurance, may have been, to secure large sums of money to his family and friends, by a supreme fraud. When we reflect on the enormity of the crime, on his hopeful disposition and self-confidence, especially on the large enterprises which he had in view, it seems more rational to interpret his conduct by the light of other motives. From this point of view the large insurance was intended to bridge over the period between the present impecuniosity, and that successful enterprise with "millions it it," which, as the testimony shows, he had entered upon. The disclosures of the post-mortem render it probable that he was in the incipiency of one of those forms of mental derangement characterized by expansive ideas. Pachymeningitis accompanied by a hemorrhagic extravasation is so common a condition in some forms of insanity that we can hardly doubt its agency in this case A large life insurance was a natural conception of a mind now about to enter on gigantic schemes of money-getting.

The most important and, indeed, only real evidence of suicide was afforded by a peculiar indentation and a corresponding line of discoloration around the neck, extending from both sides upwards and backwards, as if made by a cord. There was no proof of hanging. On the contrary, the testimony of several witnesses to the final cessation of Dwight's breathing is conclusive against the theory of suicide by strangulation. What, then, produced this appearance of the neck? The explanation offered by the undertaker is, probably, the correct one. After death, the flexing of the neck caused by the support under the head, and suggillation, the tissues being fixed in this positon by a packing of ice, produced the appearance of which so much use was made by the experts of the insurance companies. Dr. Swinburne, of Albany, was the original author of this strangulation theory, supported it by his testimony at the coroner's inquest, and, undoubtedly, impressed his views successfully on the insurance companies' experts. There was no injury to the hyoid bone, to the larynx and trachea, but some evidences of death by asphyxia were certainly present. Strangely enough, no attention was paid to this condition as a result of morphine narcosis. We have already alluded to the effect of this narcotic, when the condition of the heart was under consideration; but the post-mortem appearances indicate that respiratory failure probably preceded by a few seconds the arrest of the heart, for this organ was nearly emptied of blood, and the lungs were congested and inflated.

It is the misfortune of our present system of jurisprudence, as regards expert testimony, that the medical men summoned on one side assume the position of partisans, and testify only to facts that are regarded as favorable to the side on which they are retained. The theory of strangulation suited the interests of the companies seeking to establish fraud, and it would have been fatal to their cause to admit the agency of the repeated doses of morphine in inducing death. That respiration was deeply embarrassed is shown by the testimony of the person who sat up with Dwight on the night of his death. Ten minutes before breathing finally ceased, this person sitting in the room adjoining, heard Dwight "gasping for breath."

Reviewing now the case in its entirety, we believe that the decision at which the jury arrived is supported by the medical evidence, and that the accusation of fraud is unjustified. If the lesions demonstrated by Dr. Delafield at the first autopsy seem inadequate to explain the fatal termination, the enormous doses of morphine administered on the last day of Dwight's life, by way of "preparation" for the expected "congestive chill," are quite sufficient. He had suffered from a pachymeningitis, and there had occurred a recent extravasation at the site of the old exudation; the intestinal glands manifested the appearances of the prodromal stage of typhoid; the spleen was enlarged and softened, and the forces of the body were reduced by several weeks of illness: under such circumstances, is it surprising that, having received three grains of morphine within a few hours, death should have occurred with all the phenomena of respiratory paralysis? The insurance companies should profit by such an experience, and eminent experts should view all sides of similar cases, and become judicially minded if they would retain any of the influence belonging to the scientific character in presence of court and juries.

THE CONVERSION OF TUBERCLE INTO AN INERT FOREIGN BODY.

In an elaborate memoir just concluded, which has appeared in the *Revue de Médecine* (Nos. 9 and 10, 1883), MM. Parrot and Martin have studied the action of various destructive agents on the tubercle parasite. The problem which they set themselves to solve consisted in the discovery of some agent which will convert tubercle into an inert, and therefore harmless, foreign body. We can hardly experience a feeling of surprise and disappointment that the problem still remains insoluble. The progress of pathological discovery only postpones to a still more remote future a therapeutical remedy, and he must be unquenchably sanguine who can hope from our existing resources to find the agent which can safely effect the destruction of the tubercle parasite *in situ*.

If MM. Parrot and Martin have not discovered a cure, they have, at least, so far narrowed the field of inquiry as to demonstrate the inutility of some supposed remedies, and to indicate the work to be accomplished by the remedy of the future. Their research has also tended to establish the specificity of tubercle by showing its power of resistance to the various destructive influences. So little impressionable is the tubercle parasite that no agent now at our command will act destructively on it that does not, at the same time, affect the living tissues injuriously. The agents employed by them were salicylic acid, sulphate of quinine, corrosive sublimate, carbolic acid, creasote, bromine water, and peroxide of hydrogen. In the quantity suitable for administration, none of these exercised any influence on tuberculous virus. The only agent capable of effectively destroying it is heat of 212° F.

From this point of view, tuberculosis is the result of pullulation of a living organism. It does not live necessarily on the surface, and may exist for a long time wholly deprived of oxygen. MM. Parrot and Martin found, indeed, that some tubercle matter, immersed in almond oil, and kept from all possibility of the access of air, preserved its activity for several months. After a time, indeed, its infective property is lessened, but it is found that by repeated inoculations its activity is restored. Also, when immersed in alcohol for several days, the infective property is enfeebled, but by successive inoculations in animals, its normal power is regained.

These facts indicate how difficult is the attempt to procure a remedy which shall accomplish the destruction of tubercle infection. The system of attenuation of virus found by Pasteur to render some kinds finally sterile cannot be applied to the tubercle parasite. Antiseptics, as far as known to us, are powerless in any degree of strength within the limits of safety. The body is a culture ground in which the parasite finds the material of its development, and its pullulation causes the appearances to which we apply the term tuberculosis. Thus under our eyes proceed the ravages of a parasite which we are unable, in the present state of our knowledge, to destroy or render inert.

BISMUTH AS AN ASEPTIC DRESSING.

In a paper, read at the Twelfth Congress of the German Surgical Association, Riedel, of Aix-la-Chapelle, stated that his experience with the dressing of wounds with subnitrate of bismuth supported that of Kocher, who first called attention to it. He thought that the aseptic property of the remedy was due to the incessant disengagement of minute quantities of nitric acid, through which it acted as a mild caustic upon the tissues. He had, however, found it powerless in abscesses and in erysipelas, and, in consequence of its producing adhesions, he advised that it should not be used in operations upon the chest and abdomen.

In the discussion which followed, Kocher stated that bismuth was not a germicide, but that, by forming an albuminate with the tissues, it converted the latter into a soil which was unsuitable for the development of minute organisms. Von Langenbeck, of Wiesbaden, and Hahn, of Berlin, were warmly in favor of the dressing. Like all other agents, however, the use of bismuth is now and then followed by accidents. Kocher had known enteritis, nephritis, and stomatitis to be set up, and Israel, of Berlin, narrated a case of extirpation of carcinomatous axillary glands, in which an acute gangrenous stomatitis developed, and small nodosities remained in the vicinity of the cicatrix, which were due to deposits of the salt.

From these observations it appears that bismuth does not sustain the hopes which were anticipated when it was first introduced. Arsenic, with which it is largely contaminated, may possibly account for the aseptic properties which have been attributed to it.

MICRO-ORGANISMS IN NORMAL FECES.

An important series of observations has recently been undertaken by student of medicine Berthold Bienstock in the Clinical Laboratory of the Royal Medical Clinic at Breslau, and reported in the *Deutsch. med. Wochenschrift*, Nov. 21, 1883.

It will be remembered that in Cohn's classification there are four principal groups of bacteria, or cleft-fungi: 1. Micrococci or spherical bacteria. 2. Micro-bacteria or short-rod bacteria. 3. Desmobacteria or filamentous bacteria. 4. Spiro-bacteria or screw bacteria, one of the genera of which is the *spirochæta obermeyeri* or the spirillum of relapsing fever.

Now, of these groups, Mr. Bienstock has found constantly present in normal feces, a bacillus or long-rod bacterium, a genus of the desmo-bacteria. To this same genus belong the bacillus of anthrax, the bacillus tuberculosis, and others. The genus bacillus, according to Koch, is the only one capable of resisting the solvent action of the gastric juice. All the remaining genera are destroyed by gastric juice in from twenty to thirty minutes.

No less than five different varieties of bacilli were found by Bienstock in feces, distinguishable from each other partly by their mode of growth and culture, and partly by their properties.

It is impossible for us to follow Bienstock in his description of these varieties, of which one, found capable of breaking up albuminous substances, was conspicuously absent from the intestinal contents of suckling infants, whose only food was milk; while the same stools carefully collected were capable of developing the purest cultures of a second bacillus, which was found catalytic of carbohydrates. But the conclusion of the investigator that each fermentative process in the act of digestion has its own excitor in the shape of a bacterium, just as anthrax, glanders, and tuberculosis possess their specific fungi, adds a result to the investigation of micro-organisms which, if confirmed, seems likely to lead to important practical results. Shall we live to see the day when a bacterium may be prescribed for one variety of indigestion, or for the solution of a certain kind of food, and another for the digestion of an aliment which would otherwise resist conversion into absorbable peptones or creamy chyle?

In connection with Koch's recent researches upon cholera in Egypt, during which he has noted a bacillus in the intestinal walls, these discoveries are also of importance.

THE INDEX MEDICUS.

The publisher of *The Index Medicus* again places before the profession a statement of the status of this periodical, from which we learn that the mere annual cost of production is not less than $5000, and that the maximum returns from subscriptions at $6 per annum have not exceeded $3600. It is therefore evident that to maintain this publication, which has now really become indispensable to all who are engaged in medical research, it is necessary either to have a largely increased subscription list, or the same list with an increased subscription price.

To the credit of the profession of this country and its future scientific work, this publication should not be allowed to stop. The burden of supporting it would not be felt by individuals if every medical society would take a copy at $10 per annum, or if the wealthier societies would subscribe $50 apiece as a guarantee fund, as has been done by two of the Philadelphia societies. The question of what is to be done to support this invaluable publication must be decided at once, and we hope that every physician interested in the advancement of his profession—and who is not?—will endeavor to authorize a subscription by his medical society at its next meeting, and in default of that, if possible, forward his own subscription to Mr. F. Leypoldt, 31 Park Row, New York. It would be a misfortune for the publication of *The Index Medicus* to be allowed to cease.

REVIEWS.

The Pathology and Treatment of Venereal Diseases. By Freeman J. Bumstead, M.D., LL.D., etc., and Robert W. Taylor, A.M., M.D., etc. Fifth edition, revised and rewritten, with many additions by Dr. Taylor. Illustrated. 8vo. pp. 906. Philadelphia: Henry C. Lea's Son & Co., 1883.

This admirable book, which has been long enough before the medical public to need no special recommendation, is undoubtedly the best book on the subject that has appeared on this side the Atlantic, and one of the best that has appeared anywhere. As years have rolled by, it has reached successive editions, constantly assimilating the conclusions of scientific investigators all over the world, and never falling behind the advance guard of its own department of medicine. This last edition keeps up the reputation which its predecessors acquired. It comes revised, added to, and improved. The characteristic features of the original are not changed, but there has been a development like that which is looked for in sound organisms, and which speaks well for the organism and well for its surroundings. The one is shown to be healthy, the other propitious.

It is not possible, of course, nor would it be worth while, to attempt to make a complete review of a book so large, which is already so well known. But of a few matters here discussed, it may be well to say a little. In the first place, it is interesting to find that the authors speak with no uncertain sound in regard to the dual and distinct nature of the chancroidal and syphilitic poisons. Prolonged experience has only confirmed the views that they have before published. They still sanction the old notion that a tree is fairly to be judged by its fruits, and that as no one has ever been shown to have acquired syphilis from one who had nothing but a chancroid, therefore, it is reasonable to assume that the chancroid must belong to another category from the chancre—the initial lesion of syphilis. They point out the danger of judging venereal sores by their appearances alone, however useful and reliable these may at times be.

In the introduction we find the same reference that was made in the last edition to the investigations of Prof. Jones, who in 1878 announced the discovery of evidences of the existence of syphilis among the aborigines of America, as shown by the finding of bones in a state of syphilitic disorganization in ancient burial places in certain Southern States. This the authors seem inclined to accept, though they do not do so entirely. So far as we are aware, these claims of Dr. Jones have not had the attention which they deserve. They are of enough consequence to the cause of science that they should be either established or disproved.

Passing from the general to the special, we note a few points in regard to the treatment of the subject of gonorrhœa. The first of these is that the strong views of Fournier, in regard to the preponderance of the subjective element in the acquirement of gonorrhœa, are endorsed by implication. This suggests a query which could be best answered by those who have large practices in this specialty, namely, whether or not the majority of cases of gonorrhœa are found in those who, on account of youth or inexperience, or intoxication, are most impetuous and ardent in their sexual acts? It would seem that this would have some influence in deciding whether Fournier is right or wrong in this matter. We observe, again, what is always to be commended, that a proper use of the word "incubation" is made, and the reader who may need it is warned that he must not understand by this term a period of inactivity, or latency, but one in which the effects of inoculation are not yet manifest. Ricord used to say: "The period of incubation is only a period of inobservation."

Considerable space is devoted in this book to the endoscope—more perhaps than it would be worth, if it were not for the fact that it might in skilful hands be made to contribute much more than it does to clearing up the pathology of the urethra. It is, however, an instrument which but few practitioners will ever use. Those who wish to use it should not fail to examine the excellent papers of Grünfeld, to which reference is here made.

The chapter on stricture of the urethra would detain us too long were we to stop at it; but we may note, in passing, the unwillingness to accept the dictum of Dr. Otis in regard to the relative dimensions of the body of the penis and the urethral canal. An unwillingness which we think is shared by most of those who have investigated the matter for themselves. Not that there is nothing in what Otis has claimed, but that the rule he laid down is not as universal as he supposed.

Sexual hypochondriasis is treated of admirably, though briefly; and wise and honorable advice is given as to its treatment. There is no attempt made, in this connection, to make capital out of men's fears, or to be entertaining at the expense of true delicacy. The words of Sir James Paget are quoted more than once, and the spirit of his writings on this same subject is imitated.

In the chapter which treats of the chancroid there is a condemnation of the practice of touching suspicious looking sores on the genitals with "*lapis infernalis*," which one might suppose was not needed in these days of modern enlightenment, were it not that one is constantly finding that men considered to be enlightened still do this very thing. The comment of the book on this is: "I feel tempted to apply to this indiscriminate and senseless mode of practice the adjective which, in Latin, is given to the '*lapis*' employed."

In the chapter on the nature of syphilis, there is a somewhat indignant denial of the recently repeated claim of Dr. Otis, that Bumstead and Taylor have adopted his peculiar views as to the nature of the syphilitic virus, and the process of its absorption and distribution through the system.

In another place, we find an excellent and useful chapter on certain cutaneous affections of the genitals, which are sometimes thought to be of venereal origin. Some of them—scabies and phtheiriasis, for example—are, in fact, of venereal origin occasionally; but the error which the authors point out of considering them always so, and of supposing that others, such as tinea versicolor, are manifestations of syphilis, is made often enough to call for this notice in a systematic work on the venereal diseases proper.

The authors discuss in detail the still mooted question whether or not a father can transmit syphilis, by inheritance, to his offspring. To this question they give an answer in the affirmative. On the other hand, they deny the possibility of the communication of syphilis through the utero-placental circulation. In regard to the second of these propositions, we think the arguments fair and conclusive. In regard to the first, we think there might have been more space given to argument without disadvantage. The whole subject of hereditary syphilis is involved in a certain degree of darkness even yet, and we doubt whether it will be cleared up until the terms employed in speaking of it have a universal and inflexible meaning. Then there is still the question whether it is syphilis itself, or a derivative, which is inherited.

In speaking of the treatment of syphilis, we find the authors saying: "The therapeutic effect of iodine and its compounds upon syphilitic symptoms is in direct ratio to the duration of the disease." This is the usual view, and it is made stronger by the endorsement of this book; but it is a view which Sigmund abandoned before he died—so much so that he rather recommended the use of the iodine preparations for the early and more sthenic manifestations of syphilis, and the mercurials for the late and atonic manifestations. The authors speak in the highest terms of the administration of the erythroxylon coca as a tonic in the anæmic and cachectic stages of syphilis.

The concluding chapter contains a brief review of the question of syphilis in relation to marriage. This chapter might well have been made longer and more detailed, adopting more fully the form of the conclusions enunciated in Fournier's book on the same subject.

And now, as we think of this book as a whole, we revert to the expression with which our review begins, and repeat that it is in every way admirable, a credit to its authors and a credit to its publishers. Not the least instructive part of it is formed of the excellent woodcuts and colored plates which it contains. The paper and typography are of the best quality, and the binding is of the sort to send across the ocean, to show our British cousins how a good book should be bound.

ANATOMY, DESCRIPTIVE AND SURGICAL. By HENRY GRAY, F.R.S. With an Introduction on General Anatomy and Development. By T. HOLMES, M.A. (Cantab.). Edited by T. PICKERING PICK, Surgeon to St. George's Hospital. A new American from the tenth English edition. To which is added LANDMARKS, MEDICAL AND SURGICAL. By LUTHER HOLDEN, F.R.C.S. With additions by WILLIAM W. KEEN, M.D. Imp. 8vo. pp. 1023. Philadelphia: Henry C. Lea's Son & Co., 1883.

THAT Gray's *Anatomy* should have reached a tenth edition is a fact which speaks more loudly in praise of the practical utility of the work, both to the student and practitioner, than any mere words can do. In this new edition several of the sections, and notably that upon the peritoneum, have been enlarged and rewritten, new plates have been added, and the whole work has been brought to correspond with the most recent discoveries in anatomy and histology. Like the last two editions, this contains Holden's admirable "Landmarks, Medical and Surgical," and is a model of excellence in typography and engraving. Whilst its bulk renders it less useful in the dissecting-room than some of the smaller manuals, it is an encyclopædia of anatomy which every practitioner and student should have at hand for frequent consultation.

SOCIETY PROCEEDINGS.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, November 27, 1883.

THE PRESIDENT, ROBERT F. WEIR, M.D., IN THE CHAIR.

DR. W. T. BULL read a paper entitled

REMARKS ON THE TREATMENT OF IRREDUCIBLE HERNIA BY OPERATION.

With the confidence inspired by success with antiseptic wound-treatment many surgeons have been encouraged to revive operations which had been discarded, and to perform them with success. Among such none have attracted more notice than the operation for the radical cure of hernia. Various methods of operation involving the incision and subsequent suture of the structures concerned in ruptures have been adopted, and have yielded a varying degree of success. Leaving out of consideration minor modifications, these methods, which have been termed "Modern Radical Operations," may be reduced to three, viz. (Steele and Marcy): 1. Closure of the abdominal aperture of the hernia. 2. Closure of the neck of the sac by ligature or suture (Nussbaum). 3. A combination of the two procedures (Czerny).

Reports of operations and a number of papers have accompanied the experience of nine years, and we can form a good notion of the value of these operations by studying the elaborate statistics compiled by Dr. Leisrink, of Hamburg.[1] It will be sufficient for my purpose to call attention to the results of the operation for all cases not strangulated, *i. e.*, reducible and irreducible. Of these there have been operated on by one or the three methods, two hundred and two cases (one hundred and sixty-nine inguinal, twenty-five femoral, eight umbilical and ventral) with fifteen deaths, which gives a death-rate of only seven and two-fifths per cent. Nine deaths were due to septic poisoning, which represent a death-rate of four and three-tenths per cent. from this cause. The percentage of relapses, or cases in which no cure was obtained, is large. Details are not given in all cases, but of those reported there are found twenty and one-ninth per cent. of relapses. Thirty-two patients experienced relapse. A decided improvement was claimed in eighty per cent. Of the patients operated on for inguinal hernia, sixty per cent. were irreducible.

These figures show that the operation is attended with danger (seven per cent. mortality; four and one-third per cent. deaths from sepsis), and that it fails to effect a cure in twenty per cent. of the cases, while at the same time it holds out decided hope of improvement. It can, therefore, hardly be recommended to patients with hernia that can be controlled by truss. These persons are comparatively comfortable with a truss, and their condition far from dangerous, if they exercise proper care; and if any operation is attempted for their cure it should be one free from danger, such as the cure by Heaton's method of injection. The subjects of irreducible hernia, on the other hand, or at least a large majority of them, suffer frequent inconvenience, and are in constant danger of serious accidents. If the hernia contain intestine, they are generally unable to wear a truss, and have dragging pain on exertion, and frequent intestinal disturbances. They are liable to inflammation of the protruded viscera, or to the occurrence of strangulation of additional intestine. With an omental hernia some persons can wear a truss, especially if the pad be "concaved;" but they rarely do this with comfort. Without its support there is generally a feeling of weakness, inability to make more than moderate exertion without pain, and there is just the same liability or danger of the accidents of strangulation or inflammation.

These are the cases for which I believe the modern operations are desirable, and should be recommended when the simpler measures, such as rest in bed, restricted diet, repeated taxis and compression of the hernia, have failed. I have operated on all the cases which have come under my notice in the past three years, and with success. They are three in number.

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[1] For the literature of the subject we should consult "Die Moderne Radical Operation des Unterleibbrüche," by Leisrink, Hamburg: Leopold Voss, 1883.

1. Irreducible inguinal omental hernia. Excision of omentum, ligature, and excision of sac. Recovery.

A housekeeper, æt. 47, in good general health, was sent to me by Dr. Gibney for an irreducible inguinal hernia of the left inguinal region of six weeks' duration. The rupture had existed for ten years in a reducible condition, and had never given any annoyance till it became fixed, when the presence of a truss became unbearable, and she had pain in making moderate exertion. Several ineffectual attempts to reduce it without anæsthesia had been made. The swelling was over the site of the external abdominal ring on the left side, of the size of a small egg, doughy in feel, dull on percussion, tender on pressure, and contained no fluid on puncture. General health unaffected. After four days' rest in bed, with poultices applied at frequent intervals, the tenderness disappeared, and the swelling became softer. An attempt to reduce it under ether did not succeed, and an operation was recommended. On March 8, 1882, she entered the St. Luke's Hospital in the same condition as before. Under ether, and with the "spray," the sac was opened by an incision three inches in length, and found to contain a mass of omentum adherent to the sac at some places. At the neck of the sac it was as large as the little finger. It was drawn down, tied with a carbolized silk ligature, cut off, and the stump returned to the abdomen. The sac was then pulled down, its neck sewed up with fine catgut, and the rest excised; the wound united by a few catgut sutures and one silver wire with lead plates. Peat and carbolic acid dressing. Recovery was interrupted by a retention of secretion in the wound, which gave rise to slight fever, local tenderness, and vomiting on the third day. These symptoms disappeared promptly on relieving tension by opening the skin wound, and the entire wound healed by granulation under carbolic acid compresses, without further general or local disturbance, in four weeks. Six months afterwards, though the woman had discarded the truss given her on leaving the hospital, there was no sign of return and no unpleasant symptoms.

2. Irreducible inguinal omental hernia, extending into the labium majus. Excision of omentum, ligature and excision of sac. Recovery.

A widow, thirty years of age, and a seamstress by occupation, had been prevented from going out of the house, and at times even from moving about the room, for six months before she was sent to me from the Hospital for Ruptured and Crippled. The rupture appeared three years before in the left inguinal region, as large as a pea, and gradually increased to the size of a man's thumb, without ever being reduced. It gave her little trouble till about six months before I saw her. At this time she consulted a trussmaker, who made repeated efforts to fix a truss over the swelling, which he called a "gland." She could bear no pressure, and was unable to move about without pain. The swelling was three inches in length, extending from the external abdominal ring into the labium of the left side; irregular in its outline, soft to the feel, dull on percussion, irreducible, but giving an impulse in coughing at the upper part, and tender on moderate manipulation. General health good.

An operation was recommended, which was performed at St. Luke's Hospital, April 6, 1882. This operation was without spray, but with other antiseptic measures. The incision, three inches in length, exposed the peritoneal sac, which was opened and found to contain a tongue-like process of omentum, which was atrophied opposite the neck of the sac. This was tied with carbolized silk just about its thinnest part, cut off, and the stump returned to the abdomen. The hernial sac was then isolated, drawn down, its neck ligated with catgut, and the wound in the superjacent tissues of the labium extended through the greater part of the labium majus. Six sutures were put in the upper part of wound, which was now four inches in length, the lower part being placed in apposition by small peat-bags (with iodoform). Large peat and iodoform dressing. The wound healed under two dressings, except a narrow granulating strip, which was cicatrized by the twelfth day. A truss with a light spring has been worn since, though there is no protrusion and the patient feels perfectly well.

3. Inflamed irreducible scrotal hernia (epiplocele). Drainage of sac. Recovery. Antiseptic treatment with spray.

A laborer, aged forty, came to the Chambers Street Hospital suffering from abdominal pain and vomiting, which had begun twenty-four hours before admission. He called attention to a large scrotal hernia of the right side, which had been irreducible for five years. How long it had existed he could not tell. The hernia was of the size of a cocoanut, and covered the upper third of the thigh. There was no tension and the finger could be passed into the abdominal aperture on its upper surface. The surface was smooth and tympanitic over the lower part, was dull and doughy above. It was *not* decidedly tender. There was no impulse, and no impression could be made on it by taxis, but "gurgling" was produced. The man could not tell whether it was any larger than it had been for years past, but thought it got larger while he was at work, and before the vomiting began. He had slight abdominal pain, no tympanites, pulse 100, temperature 99° F., surface warm. He had been constipated for several days, but it was his habit, and he paid no attention to it. He stated, too, that he had had several attacks like this before, lasting two or three days. At the expiration of twelve hours morphine had been injected hypodermically three times, and ice applied to the tumor, and his condition was about the same. He had, however, vomited several times, but only the contents of the stomach.

Fearing the approach of strangulation I decided to attempt taxis under ether, and this failing, to operate. Taxis was tried for fifteen minutes without success. An incision three inches long was then made, and the tissues external to the sac divided. Taxis was again tried unsuccessfully. There seemed to be, however, no constriction about the neck of the sac, for the finger could be passed into the abdominal ring. The incision was extended, the sac opened and found to contain some turbid serum not offensive. A loop of large intestine slightly congested (it was barely changed in color) and distended with gas, and some small intestine not congested, forming a mass as large as a big fist, which was adherent to the bottom of the sac. It was held in a club-shaped mass by adhesion of the serous coats at its narrowest part. These bands and the adhesions to the sac were torn through, and about twenty carbolized silk ligatures applied to bleeding points. Both loops of intestine were then replaced. The abdominal ring admitted all the fingers, and the tissues overlying the sac in its vicinity were adherent and thickened. I, therefore, did not ligate the sac, for fear of injuring the spermatic cord, nor attempt its extirpation, in order not to extend the wound into the cellular tissue of the scrotum, but a counter-opening was made at the bottom of the sac and the wound sutured with silk, two drainage-tubes being inserted. Lister dressing. There was but slight shock from the operation. The wound healed entirely in four weeks with but moderate suppuration and slight fever (101.5° F.), but there was marked local peritonitis from the sixth to the tenth day. The bowels moved on the second and fourth days naturally, and there was no more vomiting. The man was discharged at the end of two months, wearing a Heaton bandage, and has not been heard from since.

It will be noticed that I have followed only the one method, that of ligature and excision of the sac, and that is the only one, from what I have read of the operations of others, that I should be willing to recommend. The apertures cannot be first pared and then sewed up without increasing the risk of the operation, and from what we know of the liability to ventral hernia after wounds of the muscular parietes, there is no reason to believe that we can effectually close up an orifice surrounded by aponeurotic structures. I see no objection in the attempt to *diminish* the size of the orifice in this way, but I believe it of doubtful efficacy. I should think it wiser to adopt the *safest* operation for an irreducible hernia, which will make it reducible. A truss will then control it, and at a later date I should endeavor to diminish or to close the abdominal aperture by the injection method.

While the statistics quoted above give one a general idea of the risks of the operation, it will be apparent to all that these will vary with the conditions of each individual case. A small omental hernia in a woman is a safe thing to cut into, and a large intestinal hernia in a man a very dangerous one. In the same way, the ligature or the excision of the sac in one case may add a trifling nick, in another, a very great one; drawing down the peritoneal pouch, cutting it across, and causing it to unite, is the chief object to be accomplished. The remainder can be left (and drained) if its removal would leave a wound with many chances of septic infection; if not, it should be excised.

I have spoken of this operation only in irreducible hernia. It is proper, however, to state, before closing, my convictions as to its employment in strangulated cases. Leisrink's tables show the mortality after operations for strangulated hernia to be as follows: Of one hundred and eighty-six cases there were thirty-three deaths, giving a mortality of seventeen and two-thirds per cent. This compares most favorably with the rate of mortality in the days before antiseptic surgery was adopted; for the statistics of Luke, Malgaigne, Textor, South, and Gosselin show a death-rate varying from thirty-two per cent. to twenty per cent. As to the duration of the strangulation, the modern operations with antiseptic treatment show: twenty-three cases operated within fifty hours, two deaths, eight and two-thirds per cent. mortality; twenty-one cases operated after fifty hours, seven deaths, thirty-three and one-third per cent.; while with the older methods we find (Gosselin's statistics) twenty-five cases operated on within fifty hours, eight deaths, thirty-two per cent.; forty-one cases operated on after fifty hours, twenty-three deaths, sixty five per cent.

This indeed convinces me that it is safe enough to add to the ordinary operation for strangulated hernia the measure I have referred to above. In other words, I would urge ligation or suture of the peritoneum at above the neck of the sac in every case of strangulated hernia, and excision of the sac besides, or its drainage, according to the circumstances of the case.

DR. CHARLES K. BRIDDON said that several years ago, during his term of service in the New York Dispensary, a colored child, eleven or twelve years of age, was brought there with an inguinal hernia on the right side as large as the child's head. It was irreducible, and had been so for a long time—perhaps had existed from birth. Only a portion of the contents of the sac could be reduced, and when so reduced there remained a band apparently passing from the upper portion of the sac to its fundus, which was supposed, both by himself and by Dr. Gurdon Buck, to be a long band of adhesion. Dr. Briddon operated, exposed the sac, and found that it was a hernia of the cæcum. There was no meso-cæcum. The cæcum had simply slipped down behind the tunica vaginalis, and into that sac a portion of the small intestine had descended which could be reduced, but the irreducible portion was composed of cæcum. The portion which was thought to be a band of adhesion was the vermiform appendix. With considerable difficulty this was dissected free, and the entire contents of the hernial sac were reduced into the abdominal cavity, and a pad was applied. On the following day the hernia was in the same position as before the operation, having been rendered so by a fit of coughing. There was so much tenderness that he hesitated about reducing it and allowed it to remain. An abscess formed in the scrotum which gave discharge to a small quantity of the fluid portion of the fecal matter, but nothing solid; and it continued to discharge for years afterwards. The child was not at all benefited by the operation.

He had performed the operation referred to by Dr. Bull, that of tying the neck of the sac, and always resorted to it in strangulated hernia, but had his doubts as to whether it had been of service. In cases in which he had tied it high up, there had always been a necessity for the use of a truss afterward. He had also several times tried to approximate the columns forming the external ring, but without any benefit. On one occasion he excised the sac, but should never make that attempt again. It was a serious operation in a case of irreducible inguinal hernia, which was followed by a great amount of constitutional and local reaction. He thought the operation proposed by Dr. Bull, that of tying the sac and leaving the rest open to heal by granulation, was the best method to be adopted.

DR. A. C. POST presented a specimen of

UNUNITED FRACTURE OF LEFT THIGH, A HAND'S BREADTH ABOVE THE PATELLA; RESECTION; FRAGMENTS UNITED BY WIRE SUTURES.

On the 2d of July, 1883, I was on a visit to Charlotte, N. C., and saw J. M. Roark, a man fifty-one years of age, who had been injured by the explosion of a boiler on the 24th of June, 1882. He had a compound fracture of the left thigh, a hand's breadth above the patella; also a compound fracture of the left arm near its middle, and sundry contusions of different parts of his body. He had recovered from all his other injuries, but the fracture of the thigh remained ununited. His general health was good.

Condition, July 2, 1883: The limb is shortened about five centimetres. The upper fragment overlaps the lower on the outer side, and there is very free motion between the fragments.

Operation, July 2d: The patient being etherized, I made a free incision over the anterior and outer surface of the upper fragment, divided the periosteum, and worked carefully on the surface of the bone with a blunt instrument, and, after a long and persevering effort, succeeded in turning out the end of the bone and removing it with a saw. The portion removed was a little more than three centimetres in length. The lower fragment was very deep and difficult of access, but I succeeded at last in exposing it sufficiently to pass a chain saw around it, and to remove its extremity, which terminated in a rounded point. The portion removed was a little less than three centimetres in length. It required much effort to bring the sawn surfaces of the fragments into contact. I drilled two holes in each segment, and wired the segments together with annealed iron wire. A plaster-of-Paris splint, previously prepared, was applied to the dorsal and lateral surfaces of the limb. Carbolized compresses were placed between the lips of the wound, which were simply drawn towards each other, and secured by a roller bandage. Over this a plaster-of-Paris bandage was applied.

3d.—The patient had been somewhat restless and uncomfortable during the night, but I found him in a very fair condition. Pulse 84 and of good volume; tongue clean. I did not disturb the wound.

4th.—Pulse 108; temperature 101¾°; dressed the wound; made a large fenestra in the plaster bandage: removed the compresses; washed the wound with carbolic acid, one to forty; dusted the surface with iodoform; applied lint wet with the carbolized lotion to the surface of the wound, which was in a good condition; interposed, between the skin and the edges of the fenestra, lint moistened with carbolized oil, two scruples to one ounce.

5th.—Condition improved; pulse 96; temperature 100¾°; wound in good condition; very little discharge; no odor; dressed as before.

6th.—Still improving; pulse 102; temperature 100°; same dressing.

7th.—Pulse 95; temperature 100°; all symptoms continue favorable.

8th.—Pulse 90; temperature 99.6°; wound looks well; moderate suppuration; no odor; bowels constipated; ordered cathartic enema.

A few days after the last report I came on to the North, and I have not seen the patient since that time. Last month I received a letter from his physician, Dr. J. P. McComb, of Charlotte, giving me an account of the further progress of the case. This letter is dated October 16th. He writes, "The bone has united, and the wound is almost healed. He cannot bend his knee much, but it is improving. He is walking on crutches. The limb is shortened about three inches. There is a large callus all around the limb. He is very grateful for his prospects of a good leg."

ADENO-OSTEO-CHONDROMA OF THE SUBMAXILLARY GLAND.

Dr. Lange presented portions of a tumor removed from the neck of a man twenty-three years of age, which had developed within about five years to the size of a hen's egg. In histological composition it was adeno-chondroma with formation of true bone in small places. The operation was performed about three months ago, presented no difficulty, and will probably not be followed by recurrence of the disease, the tumor belonging to a rather benign species.

ACUTE PYÆMIA OF URETHRAL ORIGIN.

The President presented kidneys and heart illustrating acute pyæmia of urethral origin. They were removed from the body of an apparently healthy man, twenty-five years of age, who had been subject to gleety discharges traceable to stricture. He had had instruments passed from time to time during the summer and in the autumn. Last Sunday his attending physician introduced a sound, No. 23 French, which passed into the bladder without violence, and with no more difficulty than had been produced on all the other occasions. A few drops of blood escaped. On Monday the man was seized with a severe chill. When Dr. Weir saw the patient he had a temperature of 105° F., and he supposed it to be due to malaria, as he knew that the patient had suffered formerly from such chills, which had invariably yielded to quinine. The temperature, however, remained high, and within forty-eight hours afterwards he began to develop joint pains and effusions. He complained of no distress in the bladder, but said that once or twice he had noticed that the urine was very slightly tinged with blood. The man became so delirious that he was removed to the hospital, where he died twenty-four hours afterwards. Before death evidence of pericarditis and endocarditis was detected, and the opinion was formed that it was pyæmic. At the autopsy multiple infarctions with grayish centres were found in the cortex of the left kidney, the right being comparatively unaffected. Pericarditis and recent valvular disease, with excavation at base of one of the cusps (ulcerative endocarditis), were found, and infarctions in the centre of the substance of the heart. The rapidity of the course of the case was especially interesting. Dr. Weir had not seen in acute pyæmia heart lesions so distinctly marked as in the present instance. There were no lacerations of the urethra, but evidences of croupous cystitis were present.

The Society then proceeded to the transaction of miscellaneous business.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, December 6, 1883.

The President, R. A. Cleemann, M.D., in the Chair.

Dr. W. Goodell exhibited two

CYSTS OF THE PAROVARIUM,

and remarked: Both patients got well; he, indeed, had never lost a patient from whom he had removed a parovarian cyst. In both cases a correct diagnosis was made previous to the operation. One interesting diagnostic point was the complete absence of the *facies ovariana.* The color in the cheeks was good, and the countenance was free from the anxious expression present in cases of ovarian tumor. One tumor had existed for ten years, the other for one. Another important point in the differential diagnosis is not only the flaccidity of the tumor, but its variable degrees of flaccidity. Upon inspection, it is seen to reach to the sternum, and seems to occupy a large portion of the abdominal cavity, but when the hands are placed upon its sternal edge, it can be compressed to the level of the umbilicus. An ovarian cyst, on the contrary, is hard and uncompressible. Exceptions to this rule are very rare, that is, either a tense parovarian cyst, or a flaccid ovarian one. A third important distinguishing point is the long time—ten years in one case—which the tumor existed, and further without marked deterioration of health. After being tapped, these tumors usually refill, but occasionally they do not, and a cure is thus brought about. The fluid withdrawn has been in every case limpid and generally colorless, but it has sometimes had in his experience an emerald tint. These tumors are generally free from serious adhesions, but if, in an operation for the removal of one, adhesions should exist where for any reason their forcible separation would be unadvisable, or the cyst were intraligamentous, he would not hesitate to leave the adherent portion of the cyst-wall or the whole cyst itself, after making a big hole in it, as the fluid it secretes is bland and unirritating to the peritoneum.

Any one examining one of these cysts for the first time, would consider it to be of ovarian origin: for it is only by patient search that the ovary can be found spread out over the cyst-wall. The microscope will decide with certainty in any otherwise doubtful case. The tumor is covered with a beautiful network of veins.

When a cyst of the parovarium exists on one side, the ovary of the opposite side is usually found to be diseased, and should be removed. In these cases the remaining ovary was seen to be enlarged, and the site of a small ruptured cyst was pointed out. The Fallopian tube was also enlarged, and the terminal vesicle of the Fallopian tube, or the hydatid of Morgagni, was enlarged and cystic. This hydatid sometimes attains the size of an orange, and often ruptures spontaneously without any bad effects. A few years ago, one of these small cysts ruptured while he was making an examination of the patient to ascertain its character.

DR. GOODELL exhibited a

CANCEROUS WOMB REMOVED PER VAGINAM.

In view of the very large mortality of the operation for the removal of the womb for the radical cure of uterine cancer, he had been unwilling to perform it. In most of the cases where the disease had been seen early enough by him to give a chance of success, the patient had been unwilling to take the risk. On one occasion when every preparation had been made to operate, the patient had a convulsion, and an examination of the urine showed a high proportion of albumen, in consequence of which he refused to operate. About a month ago, Dr. Chas. W. Dulles called on him in consultation to see a patient in whom the carcinomatous condition was limited to the anterior lip. The womb was movable. The case was put frankly before the patient, and all its dangers pointed out. The choice of them being given to her, she decided, after due consideration, to take the risks of the radical operation. The operation was not as difficult as he anticipated.

The first step in the operation was to scrape away all cancerous tissue, and to sear the remaining surface with Paquelin's cautery. The vagina was then thoroughly cleansed. A stout thread was passed through the cervix to draw down the womb, instead of using a volsellum, the handles of which would be in the way. A circular incision was made around the cervix, and the tissues were stripped up anteriorly and posteriorly to the reflection of the peritoneum, and laterally to the insertion of the broad ligaments. Finally, the peritoneum was opened, and the womb retroverted into the vagina by means of the obstetric crochet passed over the fundus. A strong thread was now passed through the body of the uterus, by means of which to manipulate it more easily. A ligature was now passed around the broad ligament of the right side, and secured it *en masse*, and a second double ligature was passed through it, and tied on opposite sides. This side of the broad ligament was then divided, the uterus drawn down, and the ligament of the left side secured in a similar manner, and divided. The vaginal wound was closed and dressed with iodoform and cotton. A frank peritonitis set in on the third day, and proved fatal on the fourth. The result made him doubtful whether the operation is ever justifiable; he indeed felt disposed to avoid it whenever possible.

DR. E. E. MONTOGMERY inquired about the feasibility of using the galvanic wire écraseur to divide the broad ligament, keeping the wire at a low red heat, and dividing the tissues slowly, and avoiding the necessity for a drainage-tube. Another method which he had been revolving in his mind was, by means of the galvanic knife, to dissect out the uterus, leaving the peritoneum intact, thus imitating, to a certain extent, the operation of Dr. Marion Sims, of scraping and the use of zinc chloride.

DR. GOODELL thought that Dr. Montgomery's galvanic wire would get too hot as the loop became small, and would then divide rapidly like a knife, and incur the danger of secondary hemorrhage. He feared that the steam generated by the hot wire would penetrate the peritoneal cavity, and have an irritating effect. He has a galvanic cautery-battery, but has not used it since the introduction of Paquelin's benzoline cautery, as he finds the latter far more handy and manageable. He thought Dr. Montgomery's suggestion of shelling out the uterus a good one.

DR. MONTGOMERY exhibited, through the courtesy of Dr. W. H. Warder, the

UTERINE APPENDAGES

which had been removed from a young lady for the relief of dysmenorrhœa, which had resulted in physical and mental failure. Menstruation had commenced at the age of fourteen years, had always been painful, and had developed hysterical manifestations. Bathing at the sea-shore had at one time stopped the periods for three months; after this her health failed; her mind had been seriously affected for the last three years, and she would run away, or do herself some violence at the menstrual periods if not closely watched. Examination: the uterus enlarged and tender; there was profuse leucorrhœa. The os uteri was dilated, and the uterine cavity scraped and cauterized with carbolic acid and bromides, etc., used internally, but no improvement resulted. The ovaries were removed today through abdominal section; catgut ligatures were used. The ovaries are very much enlarged, and contain small cysts. The abdominal wound was closed with silk sutures, and covered with an impervious dressing of collodion, cotton, etc.

HYSTERO-EPILEPSY AS A COMPLICATION OF PREGNANCY.

DR. WILLIAM H. SHIPPS, of Bordentown, N. J., sent the following contribution:

Briefly defined, hystero-epilepsy is a term applied to an abnormal neurotic condition in which are manifested certain phenomena characteristic both of hysteria and epilepsy. Out of two hundred and seventy-six patients confined at La Salpetrière Hospital, Paris, under treatment for various nervous affections thirty-two were diagnosticated by Beau, a careful observer, as suffering from this disease. Among this number the malady assumed either a distinct or combined form, hence he very wisely groups the cases into two classes. In the first, the hysterical seizures and epileptic fits remain distinct, one from the other; to this form he adapts the term given by Landouzy, and designates it as hystero-epilepsy with distinct crises.

In the second class, and the one of which this article furnishes an illustration, the hysterical and epileptic seizures are coeval, both developing at the same time; to this form the name of hystero-epilepsy with combined crises has been given. The object of this paper is, not to enter into a consideration of the disease as it is met with in general practice, but simply to examine it as a complication of pregnancy, a standpoint from which fortunately we are rarely called to view it.

During the early part of March, 1883, I was called to attend a woman said to be in a fit. Arriving at the house, I found, lying on a bed, a young woman apparently seventeen or eighteen years of age, of fairly vigorous physique, who was striving against the united efforts of two or three neighbors who sought to prevent her doing herself bodily harm in the violence of her struggles. Examination showed entire loss of consciousness, eyes open and staring, pupils widely dilated, frothing at the mouth, which was then tightly closed, pulse full and bounding. Inquiry elicited that during the day she had been visiting a friend, herself the subject of some spasmodic affection, and whilst in her company became greatly exercised by some trivial occurrence, and in this state of excitement returned home, which place she no sooner reached than she was seized with a convulsion. Her husband informed me that she was in the third month of pregnancy, and that prior to this morning had on one or two occasions attacks somewhat similar, though of less severity. I at once injected hypodermatically one-third grain of morphine, which in a short time was followed by a total disappearance of all spasmodic action, a state of stupor supervening from which in the course of three or four hours she aroused apparently as well as ever. On the day following, I was called to see her and found her in a state of high nervous excitement, sobbing and deploring the presence of some impending danger which she, in her imagination, insisted was threatening her. In a short time the stage of muscular contraction, loss of consciousness, stupor, etc., took the place of the hysterical symptoms, finally terminating as before in a return to her normal condition.

Without attempting to follow the case step by step, taking in all its details, and noting the many and peculiar phases through which it passed, it is interesting to note that prior to September 23, 1883, covering a period of two hundred days, not a day passed without the occurrence of one or more paroxysms. At times the hysterical phenomena would be most marked and usher in the attack; then again the epileptic fit would take the precedence, always, however, accompanied by the undeniable imprint of the dual disease hystero-epilepsy. In the inter-paroxysmal period she enjoyed for the most part average good health.

On the morning of September 23d, I was asked to see her in an attack of more than usual gravity. When I reached the house she was profoundly unconscious, and had been so for several hours. The time for her approaching labor being near I made a vaginal examination, but found no evidence of commencing uterine action. I ordered a hot mustard bath, mustard to the extremities, and bromides the moment she should be able to swallow. In the evening, when I again called, her condition was apparently unchanged. I then ordered a blister to the nape of the neck and left the patient, to return early in the morning. At 7 A.M., a messenger called stating that the woman was now perfectly rational, and, to all appearance, in labor. I at once responded and found that she was having bearing down pains of moderate intensity at intervals of five or ten minutes, mouth of womb dilating, vertex presenting. I remained by the woman's side until 3 45 P.M., when the child, a healthy female weighing nine or ten pounds, was born. The labor did not differ from ordinary labors, except that it was only by the utmost vigilance that the woman was prevented falling into one of her accustomed attacks. After the birth of the child, I gave it to the mother, at the same time remarking to her, that, as she valued the life of the child, under no circumstances to allow herself to have another convulsion. She promised faithful obedience, and up to the present has not shown the first indication of her old trouble. It should be mentioned that during the entire period the patient was under observation, she had daily taken large doses of the bromides and other nervines, without any effect save perhaps in ameliorating the number and violence of the paroxysms. The case is interesting on account of the rarity of the disease as a complication of pregnancy; its persistence throughout the entire period; its resistance to all remedial measures, and the final disappearance of all symptoms after the termination of labor.

Two queries very naturally present themselves: What was the exciting cause of the attacks? Would the induction of premature labor in this and similar cases be justifiable?

In answer to the first query, I attribute the attacks to an action upon the brain and spinal cord, reflex in its nature, and developed or excited by the fœtus in utero.

The happy termination of the case would seemingly offer a negative to the second query; but better judgment will, I think, suggest the wisdom of the operation, and the danger of refusing to employ what theoretically at least offers the only chance of relief; at all events, in a similar case I would most certainly have recourse to the operation, and expect from it the best results.

CORRESPONDENCE.

ACTINOMYCOSIS IN ANIMALS.

To the Editor of THE MEDICAL NEWS.

SIR: In your report of the Detroit Meeting of the American Public Health Association I am represented as denying "that the recognition of the actinomycoccic character of the disease (of the jaws of cattle) was of so recent a date as claimed." Your readers will naturally infer that I deny the priority of Bollinger's demonstration of actinomycosis. Nothing could be further from the truth. What I do deny is the claim put forth by Dr. Belfield in his paper, that he was the first in America to demonstrate the existence of the actinomyces in this disease. The fact is that ever since Bollinger published his observations, I have taught the true nature of the disease to my classes, and in February last, in connection with a diseased herd about which I had been consulted, I brought the matter before the Medical Society of Tompkins County, N. Y., exhibiting a number of microscopic slides of the fungus and stating the known facts as to its development in the bodies of men and animals. The following note from the Secretary of the Society gives quotations from the minutes of the meeting in question:

"ITHACA, November 26, 1883.

"PROF. JAMES LAW.

"DEAR SIR: In answer to your inquiries, I here transcribe from minutes of a meeting of the Tompkins County Medical Society, held February 21, 1883, at Ithaca, the following record:

"'Prof. Law favored the Society with a clear statement of the nature and symptoms of actinomycosis occurring in various animals, and sometimes in man, and exhibited to us the cells of the fungous growth under the microscope.'

"Respectfully,
"S. P. SACKETT,
"Sec. of Tompkins Co. Med. Soc."

About the same date I showed the slides of actinomyces to several of my colleagues in the natural history department, to Dr. Wey, Jr., of Elmira, and others.

In a recent case about which I was consulted by a former student now raising stock in Montana I advised the excision of the fungus as far as possible, and the thorough treatment of the sore with iodized phenole. The result is given in this letter.

"FORT BENTON, M. T., July 22, 1883.

"PROF. JAMES LAW.

"DEAR PROFESSOR: I have been meaning to write you for some time on the result of my operation on the big-jaw. Immediately on the receipt of your letter I decided to try the experiment of cutting it out. The disease had run pretty long, and I was astonished to find it had eaten a cavity from the lower edge of the bone up along the teeth, about two inches wide at the upper edge, and in places cavities three-quarters of an inch deep. I had nothing but ordinary scalpels, and found it impossible to do it properly. I scraped the bone as well as I could, and painted it with carbolic acid and tincture of iodine. And here was the trouble: the blood and saliva were running so freely that they carried the medicine into the mouth, and the cow was continually sucking through the wound and swallowing. For a long time I thought she would die, as she became a mere walking skeleton, seldom lying down. I thought this was due to the burning of her stomach with the iodine and the acid. I found, by feeling, that the fungus was growing anew, and I painted it thoroughly again with iodine, being careful not to get it into her mouth. Since then she has picked up wonderfully, the wound has healed up, the disease is apparently killed, and the cow is getting fat. I am confident now that I can cure it if taken in time, and am very glad I made the experiment. I had no means of preserving any of the fungous growth, but send some of the fragments of bone that were in it. . . . .

"Resp'y, your old pupil,
"EDWARD C. RUSSEL."

The fragments sent proved as I had expected, that the *big-jaw* of Montana was identical with the already familiar actinomycosis of New York.

I state these facts not because the question of priority in demonstrating the actinomyces in America is a matter of any great importance when the pathology of the well known disease had been once discovered by Bollinger, but because of the statement in Dr. Belfield's paper, that American veterinarians were still ignorant of the true nature of the malady, and looked on it as a scrofulous affection—a mistake into which I regret to see you also fall, notwithstanding my prompt repudiation at the Detroit meeting. As further illustrating the fact of the prior recognition of the actinic fungus in America, I may state that Professor Taylor, of the Agricultural Department at Washington, has for a length of time recognized the actinomyces as growing in the lungs of dogs, and has cultivated the same artificially.

This susceptibility of the dog to the attacks of the fungus, which has been corroborated by Vachetta (Osteochondro-sarcoma macrocellulare con Actinomyceti alla mandibola inferiore d'un Cane, *La Clinica Veterinaria*, 1882), implies, as in man, the probable implanting of the disease from another source than grain, as neither of these genera consume grain in the uncooked condition. The dog can in no sense be called a graminivorous animal, so that the theory of Dr. Belfield, that the disease is peculiar to such subjects, is no longer tenable.

Though much remains to be learned as to the mode in which the germs are implanted in the tissues, the notorious predilection which they show for the vicinity of carrion's teeth, for the tongue, and for the pharynx strongly suggests that at the outset they usually secure a foothold in the morbid products of a sore, or in the partially devitalized tissues that are undergoing inflammation, and that once fairly seated their invasion of new tissue advances steadily in the products of the resulting peripheral inflammation. In a case which I saw in the Chicago Stock-yards, through the courtesy of Drs. De Wolf and Belfield, the disease extended on both sides of the upper jaw, around a pair of molars which had made an imperfect eruption, and which still remained so far beneath the level of their fellows that the enamel had not been worn off their tables. Between these teeth and the next adjacent ones were cavities filled with the débris of food. In the majority of cases that I have seen, diseased teeth or alveolæ have been a prominent feature. This, taken with the fact that the malady so often starts in the jaws of the young, about the period of the second dentition, suggests a frequent etiological connection with dental disease. When actual disease of the teeth has not already existed, there is still the presumption that the actinomyces had become lodged in the cavity left after the evulsion of the deciduous tooth, and before the growth of the permanent one, seeing it could then make its way so easily through the irritated and inflamed periodontal membrane into the osseous tissue beneath. In other cases, doubtless, the germ makes its way through the superficial abrasions which are so liable to happen about the mouth in vegetable feeders.

The precise measure of the danger to man must be determined in the future. We must ascertain by experiment the temperature at which the fungus is destroyed in cooking; also in what medium it lives out of the animal body, and its consequent opportunities for entering the body in food, water, and air. The discovery of the fungus already in over thirty human bodies, the frequency of the disease in such a large class of quadrupeds, and the especial liability of the herbivoræ (ox, horse, goat, swine, rabbit) implying the probable growth of the fungus on vegetable products, invest the disease with an importance which must command the attention and investigation of sanitarians. There is reason to believe that the malady is indigenous to certain districts. I have known it to attack three successive generations of cattle living in the same place. Again, in certain herds, I have seen as many as four or five individuals suffering at the same time. Yet I have not, so far, been able to trace any etiological connection with a particular geological formation, nor with any peculiarity of the flora. Its connection with grain-feeding is probably quite as much owing to injuries to the teeth and gums from the flinty seeds, as to these being the true vegetable habitat of the fungus. This is the more probable since we find the disease on the pastures of Texas and Montana in cattle that have never seen grain, and in the distillery stables at Peoria and elsewhere, among cattle drawn from the pastures in question, and fed grain only as distillery swill, which has been subjected to a boiling temperature.

Respectfully,
JAMES LAW,
Professor of Veterinary Medicine.

ITHACA, N. Y., November 28, 1883.

OBITUARY.

THOMAS STORY KIRKBRIDE, M.D., LL.D.

DR. THOMAS S. KIRKBRIDE, Physician-in-Chief and Superintendent of the Pennsylvania Hospital for the Insane, died on Monday morning, December 17th, after a protracted illness, at his residence, within the grounds of the institution which, for over forty years, he had faithfully served.

Dr. Kirkbride's habitually vigorous health sustained a severe shock four years ago in a prolonged illness, from the effects of which he only partially recovered. About two years ago, he had a second illness, from which again he rallied, and last winter he was able to resume a considerable portion of his ordinary duties. In the spring, he was again, however, prostrated, and never rallied to any hopeful extent. During the last few weeks, there have been periods of temporary improvement, and he has even been able to drive in the Hospital grounds. On December 14th, he had a severe chill, and gradually relapsed into coma, from which he never rallied.

Dr. Kirkbride was born on July 31, 1809, near Morrisville, Bucks County, Pennsylvania. His ancestor, Joseph Kirkbride, came to this country from the parish of Kirkbride, County of Cumberland, England, with William Penn, being connected with the Society of Friends, as have been his descendants down to the present generation. He received his academical education at Trenton, N. J., and graduated from the Medical Department of the University of Pennsylvania, in March, 1832, the subject of his thesis being "Neuralgia." In the following April he was appointed resident physician to the Friends' Asylum for the

Insane, in which position he served for one year, when in March, 1833, he was elected resident physician to the Pennsylvania Hospital, where he remained two years, after which, settling in Philadelphia, he engaged in private practice, devoting himself principally to surgery, and at this time he was physician to the House of Refuge, the Institution for the Blind, and the Magdalen Asylum.

In October, 1840, without solicitation on his part, Dr. Kirkbride was elected Physician-in-Chief and Superintendent of the Pennsylvania Hospital for the Insane, a new institution on the west side of the Schuylkill River, then nearly completed, and to which it was intended to remove the insane from the old hospital at Eighth and Pine Streets. The new hospital was opened on the 1st day of January, 1841, since which time he has had the care and management of it. By constant improvements and additions to the original building this institution, which was then only capable of receiving a hundred inmates, now accommodates upwards of five hundred. In 1854, the original building having become crowded, Dr. Kirkbride recommended the erection of a new one on the grounds of the institution, which comprised a tract of one hundred and thirteen acres, and he urged the complete separation of the sexes as though in two distinct institutions. He further recommended that the building proposed should be erected through an appeal to the public, which, accordingly, was made, and with entire success, the building being completed wholly with private contributions, exceeding in the aggregate $355,000. This new building was a third of a mile distant from the other. It was erected in accordance with his own carefully prepared plans, and is so admirably adapted to the purposes for which it was intended, that it has been a model for similar buildings which have been subsequently erected. The new building was opened in October, 1859, and since that time the Pennsylvania Hospital for the Insane has consisted of two separate departments—one for men and one for women—each having a capacity for two hundred and fifty patients, and entirely distinct from each other in all their arrangements, though with the same physician-in-chief and the same board of managers. The success of this experiment, which he inaugurated, has been complete, and has led to the adoption of the plan in other institutions.

As an authority in mental disease, Dr. Kirkbride enjoyed the highest reputation, and his name was so identified with the great institution of which he was the physician-in-chief, that "Kirkbride's" has become in this country the popularly used synonym of the English "Bedlam." He was a careful student, and possessed marked executive ability. His faithful devotion to the interests of the institution confided to his care has frequently elicited the admiration of its managers.

Dr. Kirkbride was of square build and medium height, with a firm mouth, penetrating eye, and a charmingly benevolent face, which was expressive of his great modesty, spotless integrity, and rare virtue. He was endowed with a wonderful tact in the management of the insane, and he was able quickly to win the affections of even his most wayward patients, and his forbearing gentleness and wise firmness enabled him to exert the best influences upon all who came under his care.

His writings have given him a high reputation. His "Propositions relative to the Construction of Hospitals for the Insane," first adopted by the Association of Medical Superintendents of American Institutions for the Insane, has been repeatedly reaffirmed by them, and were published in 1854, with notes and additions, under the title of "The Construction, Organization, and General Arrangement of Hospitals for the Insane," of which a second edition was called for in 1880. In his annual reports Dr. Kirkbride, year by year, discussed at length, nearly every subject connected with the treatment and care of the insane, and they constitute a series of great value to the student of mental diseases.

No man in the United States has devoted himself more entirely to the care of the insane than Dr. Kirkbride. From the day of his appointment to the superintendency of the Pennsylvania Hospital for the Insane, his whole thought was given to whatever would tend to relieve the mental disorder of those placed in his care, and everything which could in any way assist in that work was laid under tribute from the firm belief he entertained that nothing should be overlooked, for a reason clear to every one that small things often have a great influence in turning the current of thought and diverting to happier or more gloomy thoughts as the incident may itself determine. No one can read the very able, conscientious, and practical reports which have emanated from him during more than forty years without being fully convinced that his whole energy was given to his work, and the results of that work are shown in those reports, and in his work on the "Construction of Hospitals for the Insane," which places the reader in possession of practical conclusions and sound deductions from long experience, which can be relied on while the shifting sands of theory are blown away.

The wonderful changes which have been effected in the last forty years in the treatment of the insane may, in great part, be attributed to his labors and his influence on his brethren connected with the different institutions. The amount of restraint used at that early date was greater than even those who write so much on the subject know, and Dr. Kirkbride's efforts to change that condition of things were earnest and persistent, and, while not a believer in absolute non-restraint, so zealously advocated by some whose experience is infinitesimal when compared with his, he yet held firmly to the opinion, as he did to all that he had formed cautiously and deliberately, that restraint should be used only when the condition of the case, and the benefit of his fellow-patients, really demanded it, or, in other words, on the same principle that a surgeon would apply a splint to a broken limb; and the truth was strongly expressed by Dr. Bucknill, of England, that while Dr. Kirkbride believed in restraint, he rarely used it.

Dr. Kirkbride was one of the founders of "the Association of Medical Superintendents of American Institutions for the Insane," and for eight consecutive years was its President. He was also a Fellow of the College of Physicians of Philadelphia, an Honorary Member of the British Medico-Psychological Association, and a member of the American Philosophical Society. His wife and six children survive him.

NEWS ITEMS.

BALTIMORE.

(*From our Special Correspondent.*)

The Johns Hopkins Lectures on Municipal Hygiene.—The last lectures of Dr. J. S. Billing's interesting and instructive course on *Municipal Hygiene*, have now been delivered at the Johns Hopkins University. It is to be hoped that the important matters which he discussed will not be overlooked by the health and other municipal authorities, and that many evils to which he called attention, will soon be remedied. Below is an abstract of the last four lectures.

Schools and Education.—School-regulation, a most important subject in municipal hygiene, should be under the supervision of the city; legislation on this point being just as appropriate as against the overcrowding of steamers, tenement houses, etc. The dangers of school-life to health, both in public and in private schools, are of three kinds: 1. Those connected with the plan and location of the school building. 2. Those connected with the course of studies. 3. Those connected with the spread of contagious diseases. Those of the first class are due to insufficient size of building for the number of pupils, to insufficient ventilation, and bad light. In school building, these points and security from fire are most important things. Many children, especially Germans or of German descent, have eyes slightly abnormal, which abnormality is often increased by school-life. Many think that the number of abnormal eyes is increasing; and though the increase is supposed to be due to better methods of diagnosis and increased attention to the subject, the balance of evidence lies on their side. Shortsightedness is more common in city schools than in those of the country; this is probably due to the greater amount of study done at night, especially with the ordinary flickering gas-flame in the city. In schoolrooms the light should come from the left side, or, much better, from both sides. In regard to *ventilation*, each student should have thirty feet of pure air per minute to keep the air in the schoolroom pure. To supply this steadily and without draught, requires special arrangements, careful supervision, and a great amount of fuel (to make up for the great amount of heat lost in escaping air). The desk should be of proper height for the child, and the seat should properly support its back.

The duty of municipal authorities to provide for these requisites cannot be avoided on the ground of insufficient appropriation. The *elementary schools should first be provided for*, and then money may be spent upon schools for higher education, but not before. An important fault in our methods of education, is too much study at home. The teacher should instruct, and not simply hear the pupils recite. It is now acknowledged that the object of school-education is not so much to teach facts, as to instruct them how to think, and ascertain facts, etc. The evils from excessive study fall most heavily on girls between the ages of thirteen and seventeen, in whom they often only appear a few years afterwards. The principal diseases which are communicated by schools, are diphtheria (especially in America), scarlet fever (most important in England), and measles. It is found that there is a regular increase in the number of cases of diphtheria when schools are opened and a decrease at their close. These diseases are not only communicated through the air, but also directly by drinking from the same cup, eating the same apple, putting pencils in mouth, etc. The way to avoid these is by employing constant skilled medical inspection, as is done in Brussels, where there has been no epidemic, though there have been in neighboring cities since the system has been introduced. This inspection should not be confined to the public schools, but also to private, day, and boarding schools.

Food, Markets, etc.—The health of a community depends on the quantity, quality, and regularity of its food supply. To bring just enough diversified supply of food for a city is accomplished, not by any deliberate exercise of human wisdom, but by men each interested in himself, but who unconsciously combine to effect an object, the vastness of which is bewildering to contemplate. Our supply of *meats* is good and ample, and there is little danger in eating them. The germs of infectious diseases which might be communicated by them are killed by thorough cooking (as is that of tuberculosis, too, in all probability). There is great danger, however, to cleanliness in having many private slaughtering houses. The way to obviate this is by having a public abattoir, either managed by the city or by a firm with power granted by the city. In Boston, the leading butchers took the first step in establishing one. *Vegetables*, by not being always brought to consumers in a fresh state, cause various diseases of the digestive organs. *Milk* is one of the most important articles of food, and one most liable to carry disease. Being a fluid rich in all elements of nourishment, it becomes an excellent culture fluid for germs. A drop of polluted water can fill a can of warm milk in a short time with the germs of various diseases. Great epidemics have been traced to milk which may have been rendered dangerous by adulteration with water, by rinsing cans with bad water, or by having been in the house of a dairyman whose family was suffering from a contagious disease. The flow of milk usually stops in diseased animals. Milk of a tuberculous cow sometimes causes tuberculosis in a child or an animal raised on it. The high rate of mortality among infants is due to want of proper food (mothers' milk or its next best substitute, fresh unskimmed cows' milk, sweetened and diluted). In tenement-houses in New York, infants of three months are often fed on the food of the rest of the family. It would be well to put some one firm in charge of all skimmed milk and prohibit all others from selling it, so that this article of food would not be taken from the poor, who are unable to procure other milk. *Oleomargarine* (when made from pure, sweet fat) and *glucose* are both useful and healthy. *Spices* and *coffee* are very often adulterated, but seldom objectionable from a sanitary point of view. That there is not much danger from *canned food* can be seen from the rare cases of poisoning reported, and the vast number of cans used. The salts of tin are not poisonous in small quantities, and in large quantities they would be unpleasant to the taste. A few cases of lead-poisoning have been reported (one, by the way, in The Medical News for September 8, 1883, by a Maryland physician; but since, Dr. Billings has had those cans examined and analyzed under the supervision of Prof. Remsen, and no trace of lead could be found in the contents). It is well known that there is danger of poisoning from wall-paper with arsenical colors, which is now, however, much less common than formerly. The effects are often slight ailments, mistakable for other things. On the other hand, there is no danger to the inmates of a room of lead-poisoning in freshly painted rooms, though there is to the painter. A source of great danger are the *adulterated drugs*, which may deceive the physician by their action and cause him to make an erroneous diagnosis, at times to the injury of the patient, or even his death.

Jurisprudence of Hygiene.—In sanitary legislation the interests of the many conflict with those of individuals. Who shall yield or compensate the others? It may seem as if the State were interfering with liberty when she bids the householder to ventilate his drains in a certain way; the physician to keep record of and report deaths, etc. But it is not. The State has the right of eminent domain, *i. e.*, to take private property for public use when necessary; to demand service of individuals, and to furnish compensation for the same. The State has police powers by which she prohibits the storing of gunpowder, regulates the height of buildings, and the location of hospitals for contagious diseases, etc. Upon the plea of nuisance, she can interfere in privileges established by ancient customs, etc.; and she has the right to avail herself of the light of modern science. The power of cities to do the same is limited by considerations of cost. Many of our cities are so burdened with debt that they say they cannot afford to spend money on sanitary improvements; but since these soon pay for themselves in money and labor saved and distress avoided, this plea can rarely be admitted as an excuse for permitting unsanitary conditions to remain. In this case, appeal must be made to the State. Law and equity are two distinct things. The common law says that the use of one's own property to the injury of the right of another is a nuisance; but it does not say what amount of discomfort. The importance and utility of a business have great weight in judging the question. As regards public health, the common law may be summed up "So to use thine own that thou dost not injure another;" but the remedy comes too late; pecuniary damages cannot compensate for ruined health and lost lives. In sanitary legislation, definitions of nuisances, descriptions of modes of procedure against them, should be as precise as possible. The State ought to provide for a full record of times and number of births, marriages, and deaths; for the gathering and dissemination of knowledge relative to the preventable causes of disease and death; for good drainage and sewerage; for the supervision of dead human bodies, cemeteries, etc.; and where needed for quarantine authority, and should give discretionary powers to boards of health of acting promptly and fearlessly, for subordinating private comfort to public safety, and for making all needful expenditures to avert and alleviate pestilence. The word quarantine is now used in two different senses: (1) the detention for a fixed time as a test of the presence of contagious diseases in suspected vessels (which carried to extreme is non-intercourse), and (2) maritime inspection to secure clean and healthy ships, which requires a short detention. Against smallpox, quarantine is of little value, except in compelling vaccination. If the community is vaccinated, and it should be constantly vaccinated and revaccinated, this is unnecessary, and if unprotected it is no preventative. Quarantine against *cholera* is efficacious, except when the disease has already a foothold. Since cholera appears here two years after it appears in Europe, it is highly probable that *we will have it here in a few years*, for it promises to appear in Europe next year. Our streets should be disinfected above and below the surface; all causes of soil pollution removed, etc., so that our cities are clean, when they will run little danger. To get a perfectly satisfactory quarantine, coöperation is necessary, not only between States, but among nations; yellow fever can be better kept away from this country if we inspect at Havana and other West India seaports, than at our own harbors. We have no simple preventatives against measles, scarlet and typhoid fevers, but by immediate notification and proper isolation much can be done.

Health Departments and Health Officers.—A single health officer for a city succeeds better than a board. Health officers should not be engaged in private practice, which, in various ways, would interfere with the proper exercise of his duties. The appointments should be made for not less than six years, and the compensation should be not less than $3000, and in large cities at least $5000 per annum. The appointment should be made by city officials. Competent medical men who are willing to give up a good practice to become health officers are few. We have not, as yet, men who are especially educated for that purpose, but we hope soon to have such provisions here, and to be able to send men from the Johns Hopkins University, with requisite guarantees as to fitness for such work. There are great difficulties in public hygiene; one great difficulty is ignorance—both want of information, which is easily removed, and misinformation, which is very difficult to clear up. If a man is about digging a cesspool near a well you can easily convince him of the danger, but it is difficult to show a man who has been drinking water from a well in the neighborhood of a cesspool, that there is danger, for he has used it for so many years without harm, and it sparkles and tastes so well (often from the salts dissolved from the cesspool. Another objection is the increase of taxes, cost, etc. This ignorance is being very slowly removed by the press, lectures, etc., but the best place is in the primary and normal schools.

Statistics should be kept of private premises, and this can be best done by clubs, entirely separated from city authority, such as that of Chicago.

Yellow Fever in Mexico still prevails, there having been twenty deaths from this disease at Acapulco during the last week of November. At Manzanillo all industries are in a state of decadence due to the scourge, which Assistant Surgeon Main states still continues to be the reigning terror—agriculture particularly is paralyzed. The necessities of life are scarce, almost amounting to a famine. To this is added the calamity of a strike among the day laborers and seamen in the port. Assistance has been sent there, and funds are being collected for sufferers at all the ports of the Republic—about $20,000 have so far been collected. President Gonzalez advises all places of interment of those dying of yellow fever, be covered two inches deep with unslacked lime, to prevent the exhalation of miasmatic poison. At Vera Cruz there are a few sporadic cases of yellow fever, from which it spread to Orizaba, where a good quarantine was kept up till the 20th of October, but was raised on the supposition that all danger had passed. It broke out in a malignant form, became epidemic, and was still prevailing on the 23d of November. The Governor of Sinaloa was among those attacked with yellow fever, but recovered.

Yellow Fever in Havana.—Total deaths from yellow fever at Havana, Cuba, for the week ending December 8, 1883, reported by Sanitary Inspector Burgess, is stated to be twenty-three.

The Cholera in Egypt.—The State Department is in receipt of a communication from the U. S. Consul-General at Cairo, Egypt, giving an account of the cholera epidemic in Egypt, which he obtained in a letter from His Excellency, Dr. Salem Pasha, President of the Egyptian Sanitary Council, in answer to an official request for the same. The report is accompanied with detailed statistics, fixing the number of deaths from cholera, officially reported from the 22d of June, 1883, to the 1st of September, 1883, at from 48,000 to 50,000 persons. A translation of the closing portion of the letter referred to is herewith given:

"As to the total number of mortality, the Council of Health is engaged in collecting precise statistics, and from those already obtained, the number of victims can be stated at from 48,000 to 50,000.

"As the Department is doubtless already informed by telegraphic despatches, and from other sources, the cholera, after having completely disappeared, again, about twenty days ago, reappeared at Alexandria, from which there have been officially reported from three to twelve deaths daily. In other parts of Egypt the epidemic seems to have completely disappeared, and the general health of Egypt has resumed its normal condition.

"In transmitting to your Excellency these official statistics, I deem it my duty to add that it has been found, upon a more careful verification, that the Official sanitary bulletins published during the prevalence of the epidemic were very erroneous, owing principally to the want of proper organization and sufficient number of agents in the Sanitary Department. As one example of these errors, on the twenty-fourth day of July, the sanitary bulletin fixed the number of deaths in Cairo at 465, when, from other reliable sources, notably the police statistics, the deaths exceeded 1200.

"It is generally believed, in well-informed official circles, that the final result of inquiries, especially in the remote villages, will establish the number of victims from cholera during a period of nearly four months, from between 65,000 and 70,000.

"It will be interesting at another time to note the economic effects of this terrible destruction of life upon the prosperity of this unfortunate country.

"In many villages of the interior, a majority of the laboring population has died, and, in some instances, nearly entire communities have disappeared, so that not sufficient effective hands remain to cultivate and harvest the crops."

The deaths from cholera at Calcutta, for the week ending October 27, 1883, are reported to have been 20 out of a total of 243.

College of Physicians of Philadelphia.—At the December meeting of the College *the Annual Report of the Library Committee* was presented, showing that there have been added to the library this year—

2186 volumes,
2107 pamphlets,
2862 numbers of journals.

The total number of volumes now in the library is 26,359. For the ensuing year, the Library will be kept open, except on Sundays and legal holidays, from ten o'clock A. M. to five P. M.

There are in the collection 3381 duplicates, and particular attention was called to this fact, inasmuch as it affords a rare opportunity to other libraries, of augmenting their list at comparatively small expense.

The Report of the Committee on the Directory for Nurses showed that the number of nurses registered

December 1, 1882,			209
Added during the year,.		104	
Lost by striking from roll,	6		
Lost by withdrawal,	4	10	
Net gain,			94
Present number,			303

Total number of nurses furnished during the year, 733—an average per month of 61, as against 49 for last year.

Largest number (February),	84
Smallest number (August),	34
Sent outside of the city, but within the State,	63
Sent to other States,	59
Wet nurses furnished,	17
Of registered nurses, there are males,	39
" " " females,	264
Graduates of training schools,	60
Non-graduates,	243

Many physicians take great trouble and waste much valuable time in hunting up nurses personally; or, having obtained a good nurse through the Directory, they transfer her from one patient to another directly, instead of through the Directory. Were they to use the Directory they would obtain the *same* nurses, and add to the income of the Directory, and so to the appropriation to the Library.

It is the desire of the committee to make the Directory also a bureau for all needed information for the sick; and they have in contemplation measures by which, if any one desires to obtain boarding in the country, or at the seaside, for cases of whooping-cough, or for recent cases of measles, scarlet fever, or diphtheria; and for information concerning all appliances for the sick, such as invalid-chairs, wheel and other crutches, bed-rests, fracture-, water-, or air-beds, etc., he may obtain the object he seeks at the Directory.

The amount given to the library during the last year was $200, and for the present year, $300.

Dr. Albert H. Smith will sail from Liverpool on December 22d, after an absence from home of six weeks. Dr. Smith's friends will be greatly gratified to learn that his health is much improved. While in London he was under the professional care of Sir Henry Thompson, who entertains the opinion that under appropriate treatment he will get perfectly well.

Dr. Smith has just paid a brief visit to Edinburgh, where he was the recipient of much hospitality, and was so fortunate as to see Keith perform one of his brilliant ovariotomies.

Health in Michigan.—Reports to the State Board of Health for the week ending December 8, 1883, indicate that intermittent fever, rheumatism, and influenza have increased, and that bronchitis, erysipelas, and diphtheria have decreased in area of prevalence.

Including reports by regular observers and others, diphtheria was reported present during the week ending December 8th, and since at fifteen places; scarlet fever at twenty-three places; and measles at nine places.

Obituary Record.—At Boston, on December 16th, Calvin Ellis, M.D., Jackson Professor of Clinical Medicine in Harvard University.

Dr. Ellis was educated at Harvard and received his degree in the arts in 1846, and in medicine three years later. He was one of the attending physicians to the Massachusetts General Hospital for a number of years, and Dean of the Harvard Medical Faculty.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM DECEMBER 10 TO DECEMBER 17, 1883.

Campbell, John, *Lieutenant Colonel and Surgeon.*—Having completed the duties pertaining to the office of the Medical Director of the late Department of the South, to proceed from Newport Barracks, Kentucky, to New York City, and assume the duties of Attending Surgeon in that city.—*Par. 12, S. O. 284, A. G. O., December 12, 1883.*

Clements, Bennett A., *Major and Surgeon.*—Relieved from duty as Attending Surgeon, New York City, and detailed as member of Army Medical Examining Board, now in session in New York City.—*Par. 12, S. O. 284, A. G. O., December 12, 1883.*

McKee, J. C., *Major and Surgeon.*—Assigned to duty as Medical Director, Department of the Columbia.—*G. O. 31, Department of the Columbia, December 3, 1883.*

Williams, John W., *Major and Surgeon.*—Leave of absence on surgeon's certificate of disability granted in S. O. 157, November 12, 1883, Department of the Columbia, extended five months, on surgeon's certificate of disability.—*Par. 6, S. O. 286, A. G. O., December 14, 1883.*

Shufeldt Robert W., *Captain and Assistant Surgeon.*—Now on sick leave, relieved from duty in the Department of the East, and assigned to temporary duty in the office of the Surgeon-General of the Army.—*Par. 12, S. O. 284, A. G. O., December 12, 1883.*

The Medical News *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

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ORIGINAL ARTICLES.

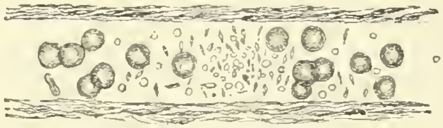
THE THIRD CORPUSCLE OF THE BLOOD.

BY WILLIAM OSLER, M.D., F.R.C.P. LOND.,
PROFESSOR OF THE INSTITUTES OF MEDICINE IN MCGILL COLLEGE, MONTREAL.

IN addition to the red and white corpuscles, there are in the blood granular bodies of various size, from that of a red corpuscle to masses ten to twenty times as large. These were first described by Max Schultze, and they may be called very appropriately, as I have been in the habit of doing for years, "Schultze's granule masses." In healthy adults they are not abundant as a rule, though exceptionally in persons in apparently good condition they abound. In all cachectic states the granule masses are large and numerous. They form notable features in blood specimens from cases of chronic phthisis, cancer, and wasting diseases generally; also in leukæmia and symptomatic anæmia; but it is not a little remarkable that in pernicious anæmia they are scanty, or even absent. In the lower animals the masses are met with in variable numbers. The blood of the young contains them in larger proportion than in adults. The new-born rat, kitten, rabbit, or guinea-pig may be used with advantage for their study. So common are they in the blood of hospital patients that it is not to be wondèred at if mistakes have arisen concerning the signs of their presence in certain diseases. Thus, in *The Lancet* a few years ago, a gentleman described them under the heading of "a new feature in leucæmic blood," regarding them as specific or characteristic elements.

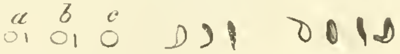
I have been told of a somewhat prominent London physician, connected with one of the special hospitals for chest diseases, who found them so constant in the blood of phthisical patients that he regarded them as peculiar to the disease, until advised by a colleague of their wide distribution. The most extensive observations upon their presence in disease were made by Dr. Reiss.[1] The common opinion regarding them has been that they represent degenerated white blood-corpuscles, or a granular detritus resulting from their decay. I first showed that they were composed of distinct corpuscles, and that the masses did not preëxist in the blood, but were formed at the moment of withdrawal by the aggregation of the corpuscles. At the edges of large groups, the disk-like corpuscles can be distinctly seen, and in the sulphate of soda solution, such as used for mixing the blood in hæmocytometer work, the corpuscular nature of the masses is quite clear. But what led me to this point was the fact of the impossibility of supposing that masses of the size of some of these could pass through the capillaries. Reiss felt the same difficulty, and suggested that in some cases they might produce embolism. In the blood of the new-born rat they are most abundant, and the subcutaneous tissue was employed to investigate the condition of the masses within the vessels. It was then found that they do not preëxist as aggregations in the blood, but are in the form of isolated corpuscles floating free with the other forms. By far the simplest way of demonstrating the isolated corpuscles in the vessels is to snip a small bit of the subcutaneous tissue from a young rat, and examine in salt solution.

FIG. 1.



In a small artery or vein, there will be seen with the red and white cells small, pale corpuscles about one-fourth the size of the red ones, often in extraordinary numbers (Fig. 1). A drop of blood from the tail of the same animal will show numerous granule masses, at the edges of which the corpuscles can be seen. The corpuscles swell in water, and become pale: dilute acetic acid renders them more distinct; they stain with carmine and methyl-violet. The corpuscles are discoid, pale, structureless (Fig. 2),

FIG. 2.



and often undergo peculiar alterations in shape, elongating or presenting two or three fine hair-like extensions. They measure from $\frac{1}{8000}$ to $\frac{1}{12000}$ of an inch. The largest I have measured was $\frac{1}{5000}$; and the smallest are from $\frac{1}{15000}$ to $\frac{1}{20000}$.

The facts above given are from my paper before the Royal Society in 1874, which was published in the *Proceedings* for June 18th of that year. A considerable part of that communication was taken up with describing the changes in form which the corpuscles undergo when kept for some hours at the temperature of the body, and examined in blood-serum; but the corpuscles were described and figured, and a true explanation given of the structure and formation of Schultze's granule masses. These bodies are undoubtedly the same as those described by Zimmerman[1] as elementary corpuscles which he found when blood was let flow into a solution of a neutral salt; after the subsidence of the colored elements, the supernatant serum contained, in extraordinary numbers, small, round, colorless corpuscles with weak contours.

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[1] Reichert u. DuBois Reymond's Archiv, 1872.

[1] Virchow's Archiv, Bd. xviii.

In 1877-79, Hayem, of Paris, investigated these bodies very carefully, and by special modes of preparation and examination was enabled to isolate them and prevent their aggregation into masses. He called them hæmatoblasts and believed that they represented embryonic red corpuscles.

From this time on, until last year, little or nothing new concerning these bodies is met with in medical literature, when in a series of papers in the *Centralblatt f. d. medicinischen Wissenschaften*, and more fully the November number of Virchow's *Archiv* (Bd. xc.), Prof. Bizzozero, of Turin, described anew the corpuscles and advanced important views concerning their connection with the process of thrombosis and coagulation. His account of the corpuscles, which he calls "Blutplättchen" (blood-plates), differs in no essential particular from that which I had already given, and his figure of them in a small bloodvessel (Pl. V., Fig. 2, Virchow's *Archiv*, Bd. xc.) is similar to my original one reproduced here in Fig. 1. The observations upon the connection of the corpuscles with thrombus formation are novel and important. When a vessel-wall is injured, or when any foreign body is introduced, the earliest observable phenomenon is the collection of the blood-plates on the wounded spot or on the foreign substance. The white corpuscles appear later and are much less numerous. The blood-plates rapidly change, becoming fused or united together and converted into a granular substance, and this dissolution or disintegration appears intimately associated with fibrin formation. In a portion of a vessel sutured between two ligatures the blood remains fluid so long as the blood-plates retain their normal form and appearance.

The influence which Schmidt and others attribute to the white corpuscle in coagulation, Bizzozero believes is due to these smaller elements. Certainly no such rapid disintegration of the colorless corpuscles takes place, as is spoken of by some writers. Under favorable conditions they may retain their vitality, as shown by amœboid movements, for twenty-four or thirty-six hours after withdrawal, and many hours after coagulation has occurred. If freshly-drawn blood is whipped with a bundle of threads, the "blood-plates" first adhere to them, and afterwards a few white and red corpuscles. If the threads are then, before fibrin is deposited, washed in salt solution, they will, when placed in a suitable liquid (proplastic of Schmidt), induce coagulation, which, as Bizzozero has shown by other experiments, cannot be attributed to the few red or white corpuscles adhering to the threads. Several facts have come under my observation which corroborate the views of the learned Italian professor. I have been struck with the density and richness of the fibrin network in blood specimens in which Schultze's granule masses were abundant. As is well known, the distinctness with which the fibrin filaments can be seen in blood slides varies very much, and I think the variations will be found to have a close connection with the abundance or paucity of these elements. As one watches the process of coagulation, the filaments first seen are invariably in association with small granules—which represent disintegrated blood plates—or larger Schultze's masses. In cases of extensive atheroma of the aorta, the thrombi which form in the small breaches of the intima may consist entirely of these corpuscles, and in aneurisms they occur on the surface of the fibrinous laminæ. So, also, in the vegetations of endocarditis, these little corpuscles are found associated with the fibrin layers so commonly deposited in these structures.

So far as I can make out, the corpuscles here described are different from the invisible corpuscles of Professor Norris, of Birmingham. The origin of the corpuscles remains a problem—one of many connected with the blood which await solution at the hands of histologists.

To conclude: 1st. There is in mammalian blood a third corpuscular element, one-eighth to one-half the size of the red corpuscle. It can be clearly seen in the bloodvessels of the living animal or in the vessels of freshly removed bits of tissue. It may be called appropriately the third corpuscle, or "blood-plate," though the latter expression is not a very satisfactory one.

2d. In blood withdrawn from the vessels these corpuscles aggregate together and form the well-known granule masses in which the corpuscles rapidly degenerate and lose their outlines. These masses, first described by Max Schultze, should be known by his name.

3d. There is evidence to show that the third corpuscle plays an important *rôle* in coagulation.

THE USE OF THE OLEATE OF ACONITIA AS A LOCAL ANODYNE.

By HOWARD A. KELLY, M.D.,
OF PHILADELPHIA.

Amid the hosts of claims continually being urged on all sides for remarkable specific effects from the use of various drugs, principally new, I have long hesitated before publishing any observations of my own not based upon extended experience. But the effects obtained from the external use of the oleate of aconitia in the following case are so remarkable that I feel justified in presenting them. The results noted in this case tally so exactly with the well-known physiological action of the active ingredient of the salt (aconitia), that its usefulness in the particular instance before us might readily have been inferred on the strong basis of *à priori* reasoning; there is, therefore, the greater hope that its value in all similar cases may approach that of a specific effect—*i. e.*, under like circumstances producing identical results.

While a resident in the Episcopal Hospital, in 1882, Dr. W. H. Bennett, then chief of the medical wards, put into my hands a pamphlet published by Dr. Squibb, of Brooklyn, giving a detailed account of the preparation of the various oleates, and at his instance I secured several of the preparations, and used them in the wards with the view of determining their therapeutic value. After many trials in all sorts of atypical cases, with varying success, the case about to be recorded was made the subject of a test of the value of the oleate of aconitia with most gratifying results.

I had admitted a short time previously a man of about forty years of age, with a large, rapidly growing aneurism of the ascending arch of the aorta. At first, the tumor could be distinctly seen pulsating in the first and second intercostal spaces of the right chest, above the clavicle, and above the sternum as big as a hazelnut. Within two months, it had grown to the size of a cocoanut, bulging from the right upper chest, a large, dusky-red, pulsating tumor, displacing ribs and sternum, which could not be found, and occupying the whole right side of the neck, tilting the head to the opposite side, and rendering it almost immovable.

All the ordinary signs common in such aggravated cases were present; the voice was suppressed and hoarse, and a paroxysmal cough and severe attacks of dyspnœa frequent. The breathing was never whistling, nor were any auscultatory sounds heard suggestive of a limited constriction of a large bronchus. The right pupil was smaller than the left, but the difference was no greater than I have very frequently observed in the healthy subject, or could at the time demonstrate in at least a dozen various cases in the ward.

The rapid growth of the tumor was accompanied by agonizing, tearing, clawing, and burning pains, occurring in paroxysms at any time of the day or night, and lasting for hours at a time. The pain was chiefly localized over the shoulder, the outer and posterior aspect of the arm, and the right side of the neck, extending up in front of the ear.

The palliative effect of two or three drops of the oleate of aconitia, of two per cent. strength, gently diffused over this area, was absolute. Paroxysms coming on were checked, and fully developed paroxysms were instantly arrested. In from five to eight seconds after the application, he felt a pricking "like pins and needles," and in twenty seconds the pain had disappeared, leaving a slight numbness.

The poor fellow's enthusiasm for the drug was well expressed one day when, as I was entering the room, he cried out: "Oh, Doctor, I was just praying you would come, and bring those drops." And during my absence, he was extremely solicitous that "the other Doctor" should know just where to find them in case of need. The results were as complete and satisfactory with the last application as with the first.

I cannot assert that the pains returned less frequently after the use of the drug, but the relief afforded by a single application lasted for hours, or until a new paroxysm developed. No constitutional effects were ever observed in this or any other case under my charge, although six, eight, or ten drops were at times used.

I have heard eminent authority declare (and prove by his practice that he believed) that *electro-puncture* was justifiable in these cases, if on the sole ground of its partial palliative effect to the distressing pains. If that is *all* we are to expect from electro-puncture, what a valuable substitute we may have here.

This patient died finally in a paroxysm of dyspnœa, without any rupture of the sac. At post-mortem examination the lost ribs were found eroded and enclosed with the thick sac wall, the sternal extremity of the clavicle was found in detached, honeycombed pieces at various points in the anterior wall, while the remainder of the clavicle projected free into the interior of the sac. The whole brachial plexus was surrounded with hardened masses of inflammatory thickening, and included within the posterior wall of the sac.

The cases in which the oleate of aconitia has found its greatest use have been well-marked examples of trifacial neuralgia, and the following, under the care of my friend, Dr. Geo. E. de Schweinitz, in which he made use of a few drops of this drug, which I gave him at his request, is in every way so satisfactory that it is well worth adding to the list.

He furnishes me with notes to the following effect. A widow, of about thirty-five years of age, had suffered extremely for two years from well-marked attacks of tic douloureux, occurring four or five times every month. She had been under all manner of recognized appropriate treatment, including, iron, arsenic, strychnia, phosphorus, belladonna, quinine, iodide of potassium; electricity, epispastics, rubefacients and anodyne applications were also faithfully pushed. Under the continued use of phosphorus and nux vomica, with the instillation of a solution of eserine, a half grain to the ounce, into the eye, for an unaccountable increase of tension, the disease was markedly controlled, attacks recurring not oftener than once a month. Nevertheless, their severity was not diminished, and in two of these attacks the oleate of aconitia was used, and complete relief was afforded in from three to five minutes by three drops of the two per cent. solution gently rubbed into the skin. The result was most satisfactory to Dr. de Schweinitz, and to the patient appeared little less than magical.

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TREATMENT OF DENUDED SURFACES.

By M. H. CRYER, M.D., D.D.S.,
of Philadelphia.

Some twenty years ago, it was noticed by horsemen that when race-horses were chaffed or galled by saddle or otherwise, ointments and other applications very often failed to restore the skin to the affected parts. For this purpose, the best remedy was found to be the dust which collects upon the curry-comb during the cleaning of a healthy animal, blown thickly into the sore.

During the past summer, fresh evidences of the efficacy of this treatment have been brought to our attention in such a manner as to merit notice. One case specially should be mentioned, that of a horse with a large discharging abscess just below the crest of the right ilium. After curing the abscess and fistula, it was found that the parts at the opening had so sloughed away as to leave a space some three and a half by four inches in diameter uncovered by skin. The owner having made several unsuccessful attempts to get the parts to heal over, thought he would have to resort to skin-grafting, the surface being in a healthy plastic condition.

Before resorting to this expedient, however, the treatment above spoken of was brought to his attention. Having other horses in his stable in perfect health, it was suggested that the epithelial cells from these, being almost pure, would, no doubt, accomplish a cure. After cleaning these horses, therefore, the dust from the currycomb was thickly blown into the uncovered ulcer two or three times a day, forming a temporary covering of almost pure dermoid tissue. The animal salts in the dust acted as a stimulant and astringent, and in two days after the first application, there was marked improvement around the edges of the parts affected. In twenty days, the parts were covered with new skin on which there were evidences of a copious growth of hair, which has now—two months from the beginning of treatment—attained almost the normal growth and appearance.

A modification of this treatment may be of benefit in restoring denuded parts caused by ulcers, burns, etc. It is certainly worthy of a trial. We are assured of a successful issue in minor cases, and we should not hesitate to apply it in even graver lesions, where skin-grafting is usually demanded.

It is safe to conclude, from the number of cases brought to our attention of a similar character, that the apparently dead dermoid cells either become in part revivified by being brought into contact with the highly plastic material of the ulcer, or produce a covering to the young formative material of the skin so nearly natural as to induce their full physiological action.

REMOVAL OF AN EXTRA-VESICAL URINARY CALCULUS.

BY JAMES L. DICKEN, M.D.,
OF LA FONTAINE, IND.

I WAS consulted on the 22d day of October, 1882, by I. F., of German parentage, born in the United States, aged thirty-three years, height five feet ten inches, weight 225 pounds; stout, robust, and healthy, and a blacksmith by occupation, who represented that, when seven years old, he was in an edge-tool shop, and was standing near a grindstone, which was in motion, and operated by his father, that the crank caught in his pantaloons near his privates, and before his father could throw the belt in order to stop the motion of the stone, he was thrown several times around, lacerating the parts, and tearing the penis entirely away from the body. He said the wound healed after throwing off some gangrenous sloughs, leaving the scrotum and testicles in a normal condition, as evinced by his sexual propensities being as vigorous as usual.

For a time, the urine passed out through the wound, but finally a fistulous opening made its appearance about one inch above and a half inch to the right of the wound, when the urine ceased passing through the wound, and had ever since passed through this fistulous opening.

At the site of the wound was a cicatrix which gave no signs of a penis ever having been attached at that point. Situated above this fistulous opening, and extending over and above the pubes, apparently beneath the skin and superficial fascia, was a calculus, apparently about the size of a turkey's egg.

A sound could not be made to enter the bladder from the opening through which the urine passed, but the calculus could be distinctly felt. He had entire control of his urine—could retain or void it at will.

He was exceedingly anxious not only to have the stone removed, but to have also a protuberance or kind of artificial penis formed, through which he could pass his urine without subjecting himself to the annoyance or inconvenience of having to use a tube to carry the urine away from his person every time he had occasion to micturate. I unhesitatingly promised to remove the stone, and to do what I could in relieving him of his inconvenience in urinating.

Accordingly, on the 25th day of October, 1882, in the presence of and assisted by Drs. N. W. Scott and C. L. Dicken, I performed the operation. The hair was closely shorn from the pubes, after which he was anæsthetized with chloroform and ether.

I then made two parallel incisions four inches long, and one inch and a half apart, extending from above the pubes down to the point where the penis should have been, connecting them at the top by a Λ incision. I dissected the strip included between the incisions, together with the tissues between it and the stone down to the point indicated, intending to fold it upon itself, and make an opening near the middle, through which I could pass a catheter, and extend it through the urethra into the bladder, and, after removing the stone, stitch the folded portion on each side around the catheter, leaving it *in situ* to serve as a continuation of the urethra till the edges were entirely united, hoping to form a kind of artificial penis. I intended also, after removing the stone, to bring the parts together from which the strip had been dissected, which I could have readily done, as the integument was quite loose, especially after the stone was removed.

When I had dissected the strip fully down, I was greatly surprised to find beneath the portion removed a full-grown penis, with glans, foreskin, frenum, and meatus, all in their normal condition, with the exception of the penis, which was somewhat shortened from the injury received at the time of the accident, and its cramped position for the last twenty-six years. I removed the stone; cut off the strip that I had intended to make a penis of; passed the catheter into the bladder; drew the penis out around it, and dissected the attachments from the penis which had formed at the time of the injury. I carefully washed out the cavity from which the stone was removed, and brought the parts together by interrupted sutures and adhesive straps, leaving the penis hanging out at the point from which it had been driven twenty-six years previously.

A compress was applied, which was also held down by adhesive straps. The wound healed readily, and in three weeks after the operation, the gentleman came to my office, and exhibited himself, showing that when his penis was erected it was three inches in length, and he was confident that it would yet elongate under proper training; at all events, it answered him much better than the goose-quill he had been using so long. The stone was of the phosphatic variety, and weighed five and one-fourth ounces Troy weight.

HOSPITAL NOTES.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

(Service of Louis A. Duhring, M.D.,)

PROFESSOR OF DISEASES OF THE SKIN IN THE UNIVERSITY OF PENNSYLVANIA.

Reported by Henry Wile, M.D.

THE "ELASTIC SKIN MAN."

This individual is a study of interest and presents a peculiar dermatological condition which is extraordinary. The subject is a man thirty-five years old, a native of Nuremburg, apparently healthy, and with a skin that appears normal until touched, when one notices some abnormal peculiarity. It is movable, extensible, and elastic on the head, trunk, and extremities, in fact, over the whole general surface. Taking hold of the skin it may be drawn out; as for example, seizing the skin over the sternum, it can be drawn over almost his entire face, or that between the scapula over the back of his head. The distance to which it can be drawn from the surface depends upon the amount of skin grasped. The skin is extremely soft, and none of the movements give him the least pain. The condition is congenital. Pulling out the skin and holding it in front of a light, the circulation of the blood in the skin only is beautifully seen. The condition is supposed to be due to an absence of the subcutaneous connective tissue, but it is a question whether the subcutaneous connective tissue is not present and attached to the fasciæ of the muscles instead of to the corium.

The elasticity is shown by the fact that on drawing out the skin and letting go, it flies back. It is more elastic in some directions than in others—more when drawn transversely to the natural lines than parallel with the lines. As far as my information extends the case is almost unique, there not being another case on record except that of a Spaniard about two hundred years ago.

The forehead wrinkles naturally, and notwithstanding the amount of manipulation that the skin has undergone, it is exceedingly sensitive. This condition exists in lower animals, and particularly in dogs, cats, and rabbits. There is a condition known as dermatolysis, which is analogous to that found in this man; but in this disease there is a state of marked hypertrophy, while here the skin is normal as to structure. As to its classification, it may be placed with dermatolysis.

MEDICAL PROGRESS.

Iodine, Externally and Internally in Amenorrhœa and Dysmenorrhœa.—It is rare, says Chéron, that amenorrhœa and dysmenorrhœa are not complicated by lumbo-abdominal neuralgia which adds to the painful state of the utero-ovarian apparatus in these affections.

Tincture of iodine freely applied, every two or three days, over the region of the kidneys, acts very much in the same manner as the application of heat, that is to say, it stimulates the centres of vaso-motor innervation of the lumbar portion of the cord, and of the sympathetic, and at the same time tends to relieve the congestion of the genital apparatus. By this congestion the normal uterine flow is interfered with, being retarded or suppressed.

The tincture of iodine alone will suffice when the lumbo-abdominal neuralgia is not internal. If the neuralgia is internal, Chéron employs the morphinated tincture of iodine: Tincture of iodine 30 parts, sulphate of morphia 1 part. Used internally, iodine is, of all the emmenagogues, one of the surest in its action, more particularly in cases of corpulent persons with very white skin, in whom the lymphatic type is predominant. Iodine may also be employed with good effect in the following formula, whatever may be the cause of the menstrual trouble: Tincture of iodine 1½ parts, tincture of aconite 2 parts, syrup of tolu 400 parts. S. Dose, one, two, or three teaspoonfuls before each meal, or one spoonful for three days, two for three days, and three for as long a time as may be desired.—*Revue de Thérap.*, Dec. 1, 1883.

The Salicyl Treatment of Acute Rheumatism.—There was a discussion on this subject at the fifty-sixth Versammlung deutscher Naturforscher und Aerzte at Freiburg.

Professor Baeumler reported one hundred and seventy-nine cases, ninety-two males and eighty-seven females. Treatment with salicylate of soda produced the result that the fever lasted but a very short time The salicylate preparations, he said, had a specific action in acute rheumatism, though in some cases the disease was only mitigated. For the prevention of relapses the remedy must be used for a longer time and in smaller doses.

Dr. Emmerich, of Nürnberg, has used ergot with salicylate of soda, as recommended by Schilling, with the result of preventing the severe cerebral and aural symptoms.

Professor Weil spoke of his method of using the drug at the Heidelberg clinic. At first he gives, hourly, grs. viij of salicylic acid—later, when the pain has subsided, he used salicylate of soda in solution, in smaller doses. An obstinate case of endocarditis was successfully treated by the salicyl treatment. A patient attacked with acute rheumatism after typhus fever, and treated by salicylate of soda, had very severe dyspnœa. Weil asked whether albuminuria had been observed as a consequence of the salicyl treatment.

Professor Baeumler has seen slight attacks of collapse after the use of the salicylates, redness and cyanosis of the face, and dyspnœa. Great dyspnœa he had seen only once in a pregnant patient, convalescent of pleurisy with effusion, to whom ʒj of salicylate of soda had been given on account of facial erysipelas. He had never seen albuminuria follow the use of the drug.

Professor Riegel thought that salicylic acid acted especially by increasing the blood pressure. He has once seen dyspnœa with cyanosis after large doses of the drug, and thought it due to cardiac dyspnœa.—*Deutsche Med. Wochenschr.*, November 14, 1883.

Encysted Peritoneal Effusion.—Dr. G. C. Roy reports the following case.

S. S., male, aged about twenty-two, was first seen on April 8, 1883. About a year ago he violently ran against the shaft of a cart on a dark and cloudy night, which hit him in the region of the liver and rendered him insensible for an hour. The part swelled up and was painful, and he came on the fourth day to the dispensary for treatment, when the left lobe of the liver was found enlarged, and a fluctuating swelling, supposed to have been the result of a hæmatoma, occupied the central site of the enlargement. Under aconite and antimony, the inflammation gradually subsided, and the improvement continued under iodide of potassium; when no more was heard of him until his second appearance, about two months after the accident, with a swelling larger than before, but painless and without fever. The only inconveniences complained of were weight and discomfort after meals. It was then taken for a chronic abscess, and aspiration was proposed, when the patient took fright and ceased further attendance until the date of the present report. This time the abdomen was bulged out at the upper part and standing in relief—the tumor extending down to the level of the umbilicus, and to the left an inch beyond the median line; it was tense and fluctuating. There was no fever, and he was very much emaciated and anæmic. The lower part of the abdomen was free from any fluid accumulation, and tympanitic. Urine scanty and high-colored, and free from albumen.

On the 9th April it was tapped with a fine needle, and one hundred and twenty-eight ounces of fluid were withdrawn. The fluid resembled that of a hydatid in many particulars, being slightly opalescent, of specific gravity 1009, containing abundance of chlorides and a faint trace of albumen, which increased however in subsequent reaccumulations. The patient was ordered iodide of potassium, gr. v. t. i. d.

By the 29th it filled up again to its original size, and sixteen pints of fluid were evacuated.

The third operation was performed on the 14th May, and the fluid measured fourteen pints. This time two drachms of strong tincture of iodine were injected without causing any pain or smarting.

The tumor filled out again, and he presented himself on the 29th May to have it emptied. He was very much emaciated, and was getting a little fever for the first time. There was no anasarca or jaundice.

Twelve pints of fluid were evacuated, the latter portion being semi-puriform, and two drachms of tincture of iodine were again injected into the sac. The specific gravity of the fluid had risen now to 1015, with abundance of albumen, and under the microscope there were numerous leucocytes and pus cells in the field. I must not omit, however, to state that before the introduction of tincture of iodine the fluid presented under the microscope innumerable long, rod-like substances, the exact nature of which I could not determine. These disappeared and gave way to pus cells after the injection of iodine.

He returned a fortnight after, worse than ever, and almost *in extremis*. At his urgent request, I opened it this time with a scalpel, and introduced a big drainage-tube to keep up a permanent discharge. The fluid was more purulent in character, but devoid of fœtor. He was sent home with a worse prognosis, but the disease now took a favorable turn. For a week every thing went on as hopefully as possible, when the putrefaction of the contents aggravated the fever and threatened septicæmia. He got over it, but ceased further attendance, when I heard he had succumbed; but to my surprise he presented himself two months after, with the tube still *in situ* and discharging. He had gained some flesh and strength, and was able to walk about. His fever had left, and he had good appetite. He was kept under observation for ten days, when the sac was daily syringed out with a weak chloride of zinc lotion. He was discharged with the tube very much shortened, as there were evident signs of the cavity contracting rapidly. It is now six months from the date of his first operation, and he is now well in every other respect, and his liver has become much reduced in size. —*Indian Medical Gazette*, Nov. 1883.

RESECTION OF WOUNDED BLOODVESSELS.—The following case, reported by DR. W. BAUM, differs in its clinical history from that published by Tillmanns (*Berlin. klin. Wochens.*, Bd. xviii., No. 3) in that in this case resection was performed on three bleeding vessels.

H. S., æt. thirteen years, was brought to the Stadt-Lazareth in Danzig, on July 5, 1883. One hour before, while cutting a wooden shoe, the knife slipped, and went into the left thigh. Profuse hemorrhage occurred, but was almost immediately checked by digital compression. Dr. Suchanneck, on seeing the patient, enveloped the limb with a rubber-bandage from the toes upward to the wound, and then applied an Esmarch's tube above. The patient had lost but little blood, the senses were entirely clear, and the strength and pulse were far better than would have been supposed after so severe a wound. After being taken to the hospital, the bandage was removed from the leg, and the wound was seen to be about three-fifths of an inch long, with smooth borders on the inner surface, and very near the middle of the thigh.

After cleaning and disinfecting the leg, Baum extended the wound on both sides. The edges were scarcely ecchymosed, and it was only necessary to remove a few clots in order to see the vessels clearly. The femoral vein was first brought into view, a conical clot closing up the wound in its wall; when this was removed, some bleeding occurred, which quickly ceased on the application of a ligature below and above the wound: the piece between the ligatures was now cut out, about four-fifths of an inch. This resected piece showed two smooth perforations through the anterior and posterior walls, each four-tenths of an inch long. The femoral artery, being wounded, was treated in the same manner. A musculo-articular branch being also wounded was resected, after which, the Esmarch's tube being removed, the wound remained bloodless. The edges of the wound were now brought together, the whole extremity enveloped in an antiseptic dressing from the toes to the hip-joints, and the limb placed in a horizontal position.

The temperature went up to a little above 100° Fah., and during the first few days the patient complained of a slight amount of pain in the limb, but it was not so great as to interfere with his sleep. On the morning after the operation, the toes were somewhat colored, and the last phalanx of the great toe seemed to be anæsthetic, but this entirely passed away by the following day. On August 2d, the patient was discharged, with perfect use of the leg.

Baum also reports the case of a man, æt. 46, who had carcinoma of the penis, with thick carcinomatous glands in the groins. The penis was removed by the écraseur, and the glands in the left groin extirpated. The femoral artery and vein were so involved with the carcinomatous glands that pieces one and one-fifth of an inch were resected from each. About a week afterwards, the glands on the right side were extirpated. No accident occurred, and the patient recovered.—*Berliner klin. Wochenschr.*, October 22, 1883.

ANTIQUE THERMAL ESTABLISHMENT.—There have recently been discovered, at Malon-le-Haut, in Beziers, the perfectly preserved remains of a thermal establishment dating from the first years of the Roman occupation.

Malon le-Haut is still much frequented as a thermal establishment.

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SATURDAY, DECEMBER 29, 1883.

ANNUS MEDICUS 1883.

About this time retrospection is in order. Each of our readers will no doubt give a few moments of the last hours of the dying year to reflections on his own individual work for the past twelve months and on its net results, and in like manner a few notes on the world's medical work for the same period seem appropriate and desirable.

It has not been an epoch-making year in medicine. There are no startling discoveries, no great International Congress, nor any marked new departures to chronicle; the stream has flowed on quietly, vexed a little into ripples and foam on a few shallow places as usual, but, upon the whole, giving to the journalist, whose business it is to watch it, very satisfactory indications of progress and of power.

In medical literature there has been a slight but distinct increase in quantity; the majority of the numbers of *The Index Medicus* for the year contain from four to eight pages more matter than usual. The high birth-rates of the last four or five years in medical journalism have continued, the total number of new medical journals appearing during the year being fifty-five, and the number which have ceased to appear being fifteen.

In general professional work for the advancement of medical science, one of the most noteworthy features is the effort which is now being made in Great Britain, Germany, and the United States, to organize systems of collective investigation of disease. The fact that coöperative work is a necessity in order to secure a sufficient amount of data for useful reasoning in regard to many obscure points in disease, has long been known, and occasionally referred to by medical writers and teachers; but it is only now that we have reached the stage when it seems feasible to set to work on this line of research.

Investigations connected with the germ theory of disease have continued to attract public attention more than any other features of biological work. The fact that a bacillus is invariably present in true tubercle seems now to be pretty firmly established, and practical use is being made of this for diagnostic purposes. Friedlander's researches on the micrococcus of certain forms of pneumonia indicate a distinct advance in our knowledge of the relations of micro-organisms to disease.

The announcement of the discovery of the specific germ of yellow fever, and of its successful cultivation and inoculation, has been made by Dr. Domenigo Freire, of Brazil, but his results have not been confirmed, and a healthy scepticism prevails as to whether they ever will be.

The care required in such researches, and the caution which should be exercised in drawing conclusions from a limited series of observations, are well illustrated in the report made by Dr. Koch of the results of the investigations made by the German Commission which visited Alexandria during the past summer to seek for the cause of cholera. This report is a model of its kind, and sets forth clearly the initial difficulty which besets researches into the intimate pathology of most of the spreading and infectious diseases of man—viz., the possibility of producing specific effects upon some animal by the cause of the disease, in order to have at command some test of the presence of this cause in a suspected fluid—whether this be a direct pathological product or the result of culture of suspected organisms.

An interesting addition to our knowledge of the effects of micro-organisms is the fact that the peculiar action of jequirity, the new remedy for granular lids and chronic thickening of the conjunctiva, have been found to be due to a peculiar bacillus.

In surgery, the principal triumphs continue to be scored in the field of abdominal surgery. Exploratory operations for diagnostic purposes, the removal of tumors of all kinds, the dilatation of the pyloric orifice of the stomach, etc., illustrate the readiness with which the surgeon now opens the peritoneum and deals with the viscera in ways that but a short time ago he would not have dreamed of.

Setting this class of operations aside, nothing remarkable has marked the progress of gynecology and obstetrics. The supply of new forceps, pessaries, and specula, has been rather below than above the average, and the cervix uteri appears to be enjoying a period of comparative quiet.

It has been a year of low mortality throughout the greater part of the civilized world. How far this is due to practical sanitary work, and how far it is due to the fact that we have had a comparatively cool summer, with a corresponding diminution in infant mortality, especially in cities, are questions which we cannot discuss within the limits of this note. At all events, the interest in sanitary work appears to be increasing among the general public, and the new profession of "Sanitary Engineer" appears to be an established addition to the various occupations open to educated men.

In the matter of medical education, matters are not yet perfect. The bill to reorganize the system of medical examinations in Great Britain, which was introduced into Parliament as the result of the very elaborate inquiry made by the Medical Acts Commission in 1881, failed to become a law, owing to circumstances which enabled a very small minority to block the wheels of legislation; but there is every reason to think that it will pass at the next session with comparatively little change. In the United States, the example set by Illinois in dealing with the worst of the quacks through the agency of the State Board of Health is being followed in other States, with the result of transferring the most offensive and unscrupulous charlatans to those States which have not as yet adopted measures of self-protection. We are still awaiting the organization of the medical department of the Hopkins University in Baltimore to provide the facilities for higher medical education which are needed in this country. The latest information which we have is that this school will probably be organized in 1885. Meanwhile, the medical schools in our large cities are flourishing, and there does not seem to be the slightest danger of any deficiency in the number of practitioners required to meet all demands.

We have had a little cholera scare during the year, and, although no cases are now reported in Egypt, it is very probable that the end is not yet. From the history of the progress of previous expansions of this pestilence, it is by no means improbable that we shall hear of it in Europe next year, in which case this country will be in serious danger. Yellow fever has prevailed to an unusual extent in Havana and in Vera Cruz, and we have had a touch of it in Florida and Alabama, but, fortunately, it has been found possible to limit its spread. Smallpox has prevailed in epidemic form in Baltimore and New Orleans, and cases are still reported in several of our large cites, but vaccination has been carried out with very considerable completeness, and although winter favors its spread, we have probably no reason to fear any serious outbreak of this disease in the near future.

Turning now to our losses, the list of the dead of the medical profession is perhaps not quite as long as usual, but it includes some distinguished names and old friends. Van Buren and Sims, Farr and Hilton-Fagge, Cloquet and Lasegue, Von Sigmund and Von Bruns, Pacini and Alvarenga, have finished their work and gone each to his own place. The medical department of our little army has been so unfortunate as to lose two Surgeon-Generals during the year—General Barnes and General Crane. But the ranks are closed up—so far as the general public can see the vacant places have been filled, and the column moves on as usual.

PULSATING PLEURAL EFFUSIONS.

Pulsation in pleural effusions, a phenomenon hitherto little understood because insufficiently studied, has been made the subject of an admirable critical investigation by M. Comby, in the November and December numbers of the *Archives Générales de Médicine* for the current year. Having had the opportunity of personally observing no less than four patients presenting this condition, M. Comby was led to collect the recorded cases. In addition to his own, he was able to find only twenty-three cases, several of which amount to little more than bare mention, a notably small number in view of the fact that pulsating empyema is alluded to in most systematic works on diseases of the chest. The first recorded case is that of Baillou (1570). In all these cases (with the exception of one which appears to have been, not a pleural effusion, but a localized abscess) there was long-standing, large, pleural effusion of the left side. After a period of latency, pulsations synchronous with the ventricular systole are perceived over a more or less extensive area of the wall of the chest in the left side, near the base. These movements are often overlooked until the chest-wall, yielding to the internal pressure, bulges with the formation of one or two pulsatile tumors. These tumors are of varying size, from that of a nut to that of an orange, and are soft, fluctuating, and reducible. Their seat is in front, at the level of the præcordial region, or at the base of the chest posteriorly, a few inches from the vertebral column. In two instances they occupied the left lumbar region.

The author regards the repeated statement that the pulsations are expansile in character as an error of observation associated with the error of diagnosis, to which it corresponds, the absence of true expansile pulsation being, in fact, an important point in the differential diagnosis between these and aneurismal tumors. Auscultation discovers at the seat of the pulsation a double *bruit*, analogous to the heart-sounds, without murmur or thrill. The respiratory murmur, vocal resonance, and vocal fremitus are absent. These tumors, moreover, are observed to diminish at the moment of inspiration, and to advance with expiration. The left chest is commonly enlarged, the intercostal spaces are widened, and the tissues in the region of the tumor are sometimes œdematous. The heart is displaced to the right, but is not hypertrophied, nor does it show other lesions dependent upon the pleural disease. In some of the cases slight pericardial effusion was present. In several instances the pulsation of the tumors was stronger than the cardiac impulse, and progressively augmented in force as the chest wall yielded. The spontaneous or the surgical evacuation of the fluid is always followed by disappearance of the pulsation, but in all cases the signs of pneumothorax at once appear. The heart tends only slightly to resume its normal position and the lung refuses to expand.

The term *pulsating empyema* is justified by the constant purulent character of the effusion. Pulsation occurs only in pleural effusions that are essentially chronic, and have lasted long enough to flatten and destroy the lung. Hence the prognosis is fatal in all cases, save those in which the pulsation appears in a circumscribed empyema or local abscess in the immediate neighborhood of the heart.

The affections from which we should discriminate this condition are: pulsatile pneumonia, pulsatile cancer of the lung, and aneurism of the aorta; and the diagnosis rests upon those signs which indicate the existence of a massive left pleural effusion associated with the pulsating tumors. Nevertheless it should be cautiously determined, lest a coexistent aneurism of the aorta be present.

The necropsy reveals the lung compressed, hard, fibrous, elastic, impermeable to air, and apparently but slightly vascular. It is flattened against the pericardium and adherent to it. Laennec pointed out the fact that solidification and compression of the lung favor the transmission of the heart's impulse rather than its sounds. Pulsating empyema is due to the forcible transmission of the cardiac impulse by a lung sclerosed and adherent to the pericardium.

We have dwelt upon these facts at some length for two reasons.

First, because the condition always presents the same general characters, whether it arises in subjects disposed to phthisis or already tuberculous, or suddenly in previously sound individuals. A period of long duration characterized by the signs of large pleural effusion constitutes the first stage. During the greater part of this period the lung is capable of again expanding, and the judicious interference of the surgeon may result in cure. The appearance of pulsation marks a second stage, that of complete destruction of the lung and its conversion into a fibrous mass incapable of regaining its functions. Recovery is not now to be hoped for. The evacuation of the pus is followed by pneumothorax; the pus reaccumulates; pulsation recurs; and the former condition is reëstablished.

Second, the lesson in practice is of the plainest nature. The structural changes in the lung which underlie the phenomenon of pulsation in empyema are the result of *prolonged* compression. The period of latency in some cases has been one, two, even three years. A far shorter period than this, a period measured perhaps by as many months, is enough in some individuals to compress the lung beyond all hope of rehabilitation. In cases treated without delay empyema cannot become pulsatile.

The rule of practice in pleural effusions may be thus formulated: so soon as there is reason to suspect the existence of pus, make an exploratory aspiration; so soon as pus is known to be present in an adult, perforate the chest-wall and establish permanent drainage.

RESECTION OF THE FEMUR FOR PSEUDARTHROSIS.

Among the operations which the surgeon undertakes with misgiving, if not positive dread, is that of resecting the ends of the fragments for non-union of fracture of the thigh-bone. The procedure is difficult of execution, especially if an attempt be made to connect the freshened ends by means of wire; the subsequent treatment is most trying to one's patience, the failures to effect union are discouraging, and the mortality is by no means inconsiderable. These remarks are the more particularly applicable to the operation as performed in what may be termed the preantiseptic period, since the statistics of Bérenger-Féraud indicate that, of 52 resections done up to 1871, 9 failed, 11 died, and 32 recovered with good union.

That these unfavorable results may be greatly modified by the employment of antiseptics is conclusively shown in a paper contributed to the *Archives Générales de Médicine*, for December, 1883, by Dr. Mathieu. Of the 18 cases which he has collected, including one of his own, 1, or 5.5 per cent., died, 4, or 22.2 per cent., failed, and 13, or 72.2 per cent., were successes. In one of the failures, the result might have been anticipated, as the resected extremities were united with catgut. These figures indicate that the antiseptic resection of the ends of the bone in false joint of the femur is worthy of extended trial after the failure of less severe measures.

VIRCHOW AND THE INFECTIOUSNESS OF TUBERCLE.

In the discussion which followed the reading of a paper by Falk, on "Inoculation Tuberculosis," before the Berlin Medical Society, on November 21, 1883, the illustrious Virchow gave at some length his views upon the much discussed question of the infectiousness of tuberculosis, and the relation of the bacillus to it.

Prof. Virchow holds that, from the experiments reported by the author of the paper, we are not justified in claiming for the bacillus tuberculosis infectious properties in the strictest sense. The term "infection," which he was the first to introduce for a large group of diseases, was intended to indicate an agency capable of producing a series of processes which agree in having a transmissible dyscrasic basis, and in that they infect the entire body. The harmful influence is not local, but works prejudiciously throughout the entire organism. Since fungi have been introduced into the category of the infections, where shall we draw the line between those which are infectious and those which are non-infectious? Is thrush an infectious process? Or is favus? The difficulty is that infection and contagion are used as though they were synonymous, while to Virchow they are entirely distinct. To him intermittent fever is infectious, but not contagious; itch is contagious, but not infectious.

As to tuberculosis, Prof. Virchow calls attention to the fact that long before the bacillus was thought of, there was acknowledged to be a form of tuberculosis in which infectious phenomena were apparently present—that is, in the so-called acute miliary tuberculosis. But no one thought there was also a specific poison at the seat of the local alteration. It was admitted that the local processes operate prejudiciously as such, but it was not believed that a toxic infection of the organism is associated with them, affecting the functions of other organs.

Again, it is proposed to compare pyæmia with tuberculosis. But in this disease we must separate the results of the embolus itself from those of other toxic agencies adhering to it, or coexisting with it. Emboli are at times non-irritant and non-infectious, at others irritant and infectious. These facts are not to be overlooked, nor our previous knowledge thus ignored. Until it has been proved that the tubercle bacillus has a general toxic action, or so long at least as we have any reason to believe its action is purely local, we dare not regard it as infectious.

It is evident, from his statement, that Virchow is not a believer in the modern doctrines of tuberculosis, and that for him the bacillus has no causal relation to the disease. He is still a believer in caseous pneumonia. In reply to the question, "Is not caseous pneumonia also a tuberculosis?" he said any one may so term it if he pleases, but to call a process tubercular in which there is nothing tubercular, seemed to him not justifiable. If, again, the question is asked, "are not tuberculosis and cheesy pneumonia both the effect of the bacillus?" even if answered affirmatively, it does not follow that cheesy pneumonia is tubercular. It is difficult for many pathologists to accustom themselves to consider the same thing from two points of view—from its causal and its intrinsic significance. Tubercle is a small nodule. Cheesy hepatization is no nodule, but frequently a diffuse infiltration of lung tissue. If both are caused by the same bacillus, one might, from a causal standpoint speak of them as *bacillar*, but certainly not as tubercular. To take an analogous example, in syphilis there are many anatomical modes of expression. There is the nodular product known as the gumma, but no one would think of speaking of the gumma as identical with syphilitic erythema. Nor would we speak of the syphilitic bubo as identical with syphilitic exostosis, although both are the result of syphilis.

Whatever may be the final solution of the question, we cannot fail to see in these remarks of Virchow the words of a master—of one who has given a lifetime to the study of pathology in its broadest sense, and not to a single field of inquiry, the study of which is so apt to narrow the horizon of the investigator, and to cause him to overlook all facts bearing upon the subject, except those he has himself noted.

TUBERCULOSIS AS THE RESULT OF THE INOCULATION OF INDIFFERENT SUBSTANCES.

It will be remembered that as far back as 1868 Dr. Wilson Fox, in conjunction with Dr. Burdon-Sanderson, published the results of an elaborate series of experiments, which went to show that tuberculosis could be produced by the inoculation of non-tuberculous matter. In view of the recent observations of Koch, Dr. Fox thought it desirable that his own investigations should be repeated. He accordingly asked Dr. Dawson Williams to do so, and at the meeting of the Pathological Society of London, held December 4th, Dr. Williams communicated his results, from which it appears that the results were entirely negative, and the evidence, therefore, was all against the theory that tuberculosis could be produced in any other way than by infection with tubercular matter.

In the discussion which followed, Dr. Wilson Fox said that he now felt that there must have been some fallacy in conducting his own experiments. He was unwilling that his former observations should still be quoted in opposition to the doctrines of Koch, and those who had more recently been working on the subject; and that therefore he felt bound to come forward, and make known the modification which his views had undergone concerning the specificity of tuberculosis.

This public retraction, while withdrawing one of the strongest arguments against the acceptance of the views of Koch, reflects, also, the highest credit upon Dr. Wilson Fox, who has thus frankly acknowledged that the laborious experiments which he had carried out, and which he had thought established important results are now without weight in the settlement of an important pathological question.

INFLUENCE OF DIABETES UPON THE FEMALE GENERATIVE ORGANS.

THE depressing effect of diabetes upon the generative functions of males has long been known. Recently HOFMIER (*Berlin klin. Wochenschrift*, 1883, No. 42) reported the case of a young woman aged twenty, who had come under treatment for pruritus vulvæ, which was found due to diabetes mellitus. Examination discovered the uterus quite small, scarcely two inches long, and the ovaries, under the expert examination of Schroeder, by aid of etherization, were found very much atrophied. As this young woman was otherwise healthy and vigorous, it was thought that this atrophy might be the result of the diabetes.

REVIEWS.

IMPOTENCE IN THE MALE. By WILLIAM A. HAMMOND, M.D., etc. 8vo. pp. 274. New York: Bermingham & Co., 1883.

IT is by no means an easy thing to review a book like this, for, however scientific it may be, it has a flavor of nastiness about it which makes its study more or less like other disgusting matters, which one avoids as much as possible, and gets through with as quickly as he can. It is, of course, important that the medical man who will be thoroughly furnished shall have accurate notions in regard to the causes, phenomena, and treatment of impotence. But opinions appear to differ as to the amount of detail which is essential to a proper understanding of the subject. Sir James Paget, for example, in his *Clinical Lectures* uncovers the unclean thing for a little while, speaks a few earnest words about its debasing causes, judiciously indicates the combination of moral and physical treatment best calculated to overcome it, and leads his reader back into a less trying atmosphere again before the sense of nausea becomes unendurable. The author of the present book, on the other hand, spreads before the reader a long series of cases, in which example follows example of pederasty, masturbation, unnatural sexual indulgence, the trials of impotent husbands, the confessions of weak moral teachers (who, it is to be hoped, will never hear of the book and learn how it all looks in print), the vagaries of sexual monomaniacs, and the ravings of absolute lunatics. If this book be designed to be a text-book—which appears to be the case—and not a collection of curiosities, we think it would have been the better for a little of the disposition which appears in Sir James Paget's method of handling the same subject. To speak plainly, we think the author has made a mistake in dwelling too much on details which are by no means so instructive as they may prove interesting. We fail to see the advantage to the intelligence, and we think we can see a positive disadvantage to the moral sense of too prolonged a contemplation of the impurities into which men have fallen. The sad fact that men thus fall, is now sufficiently established, and its consequences are pretty well understood, and there is no need to dilate much upon either at the present day.

Another feature of this book which we think demands notice, is the lack of any evident reprobation of the various forms of lust which it describes. On page 112, we are told that masturbating *twice a day* (Italics ours) for a boy of fifteen years, "or even one of any age, was pernicious excess." But nowhere does the author lay stress upon the fact that this unfortunate habit, to which so many boys become addicted before they have any idea of its true nature, is, as Sir James Paget says, "a filthiness forbidden by God, an unmanliness despised by men." The same absence of a proper moral tone seems to be observable in the author's references to fornication; and it even seems a reasonable inference from what he says on pages 198 and 199 that he looks upon it as a justifiable prescription to certain patients. Finally, we will conclude our criticisms with expressing our disapproval of both the matter and the manner of the story on pages 82–84.

It is pleasant, now, to turn from what we cannot approve, to what we find excellent in this book. It contains many facts both curious and interesting, and many suggestions which cannot fail to prove valuable to those who read its pages for instruction. The methods proposed for the treatment of the various forms of impotence are simple and rational, and almost all are entirely within the reach of every practitioner. The way the author uses electricity may not commend itself as strongly to others as it does to him; but the hygienic and medicinal remedies are of the greatest value. The author's experience appears to have been, what we could well suppose, very great. From it he has gathered a mass of facts, and drawn a series of deductions, of much value. These he has set down in a pleasing style, and his publisher has given them the benefit of the best work of the bookmaker's craft. With so much to admire, it is a pity that the book should call for the sort of criticism we have felt it our duty to apply to it at the beginning of this review.

THE INCREASE OF INSANITY IN THE UNITED STATES, ITS CAUSES AND SOURCES. By FOSTER PRATT, M.D. Kalamazoo, Michigan: 1883.

THIS paper, which was read at the recent meeting of the American Public Health Association, should elicit the closest scrutiny. It is an attempt to show that the main cause of this increase is to be found in emigration. The author distinctly formulated the contents of the paper in a part of the preamble and resolutions he offered to the Association. It read thus: "*Whereas*, It also appears that the increase of the aggregate of the insane, and of the increased ratio of their production, are caused mainly by the immigration from Europe of persons inheriting the insane tendency, and also by the transmission to their children, born on our soil, of their mental, moral, and physical defects."

In the first part of his resolutions he further emphasizes this view, and seeks to give force thereto by massing together allied, but yet distinct classes, by speaking of "the large number and undue proportion, according to population, of insane criminals and paupers among our foreign-born population," and of "the coming of these foreign defective and criminal people to burden our resources, and to deprave, by the transmission of their defects to their children, the mental, moral, and physical qualities of our present and future people."

The paper not only attempts to sustain this view, by its reference to paupers and criminals as assisted by foreign officials, but also uses this remarkable language: "Officials of European municipalities, having charge of their poor, *believe in the law of heredity. They understand its effects, and the poor family, rich in children but tainted with an insane heredity, and likely or liable to become a public charge, is shrewdly selected by these wise officials to leave their country for their country's good.*" (Italics ours.) Here is a distinct allegation. To prove it, it is not enough to show that some beadles, or poor-house officials, have, in a few instances, been guilty of aiding thriftless persons to emigrate, although this needs to be established by incontestable evidence, and in enough instances to show that it is a crime which has been tending towards a concealed system. Although the terms pauper, criminal, and insane are made throughout the paper to aid and abet each other, these are not to be taken as one. The distinct averment is that those "tainted with insane heredity are shrewdly selected by these wise officials." It would scarcely do to aver that persons insane on starting were sent, since such a statement would at once require the production of names and occasions. The only approach to this assertion is that "the social crank, the religious crank, and the political crank, all come—some voluntarily, and many involuntarily." If the paper had been one before a social science congress, in which it had been claimed that our interests required that poor and thriftless emigrants should be refused, it would have been in order to present the reasons. But it will be noticed that on the main point, that of the selection of "insane heredity to send here," or that involuntary social, religious, and political cranks were sent, we have neither names, dates, nor places, and no proof offered.

The fact of the greater ratio of insane among the foreign population is of itself worthy of study, and has not been overlooked. The reference to Mr. Wines, the accomplished social statist and statistician in charge of this part of the census, shows his appreciation of the fact and of the reasons therefor. He learns, as do we all, that it is well to exhibit the relative ratio. But when we come to speak of causes it is not correct to compare the whole population of the United States, with what, as a rule, must be the poorer classes of population when there is emigration. If to-day 100,000 of our poorer classes, those on day labor in the country, and those in the tenement-houses of our cities, should start for Australia and settle there, it is certain from the proportion of defective and insane that we always find among such classes, that in a few years there would be found more cases of insanity than among the long-settled residents. This does not prove selection and intent.

In the very start, the handling of the statistics is not fair for the purpose for which they are used. The result comes from a variety of influences and conditions as alluded to by Mr. Wines. Those too who have had occasion to get statistics as to the poorer classes coming to asylums find it very difficult to get all the facts so that many are put down as *foreign* insane, whose parents only were foreign-born, and in whom no such heredity has been traced. We have no doubt of the industry, the ability, and the earnest presupposition of the author. What we now ask, is that he place in the hands of the various consuls of European nations representing them in this country or of their ministers at Washington, the names, and date and place of arrival of those who, "tainted with an insane heredity, are likely or liable to become a public charge," and "who have been shrewdly selected by these wise officials." Also the names of the various "cranks" officially or "involuntarily" sent. Even, if only the names of five or ten can be sent at a time, let it be within the next six months, so that the facts may take the form of close evidence before the next annual meeting, and be in the shape of testimony.

Surely it is fair to have the accused see and make answer to the evidence. We suspend judgment on the paper now, but when such evidence is furnished, we believe both home and foreign governments will unite in preventing this official selection of "poor families, rich in children, but tainted with an insane heredity," to send to "the land of the free." And when that allegation is shown to be true, the author will deserve the ardent thanks of the friends both of sanitary and social reform.

Sepulture: Its History, Methods, and Sanitary Requirements. By Stephen Wickes, A.M., M.D. Large 8vo., pp. 156. Philadelphia: P. Blakiston, Son & Co., 1884.

The object of this book is to attract attention to the importance of a proper regulation of the burial of human dead in this country, and more especially in the large cities. In pursuing this object the author has collected a number of interesting facts in regard to the various methods of disposing of the dead which have been in use in different lands and at different times. He has also narrated a number of cases in which the effluvia from burial places has appeared to be the cause of illness or death. He concludes from the evidence before him that rural cemeteries, properly regulated, and permanently extra-mural, afford all the protection that is necessary to the health of the community. Cremation, he thinks, would be proper if hygiene demanded it; but the question of its adoption is not urgent in this country.

SOCIETY PROCEEDINGS.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Special Meeting, December 21, 1883.

The President, S. Oakley Van Der Poel, M.D., in the Chair.

As the time for the stated meeting for December occurred this year on Christmas eve, a special meeting was held on the 21st, in place of it. The minutes having been read and approved, the report of the Comitia Minora, recommending the election of several candidates for resident membership, was read, and the recommendation adopted; after which the resignations of three members were read, and, on motion, accepted.

Dr. H. J. Garrigues then read a paper on

THE PREVENTION OF PUERPERAL INFECTION.

He said in the outset that he had no wish to emulate the author of a brilliant paper which had recently been read before the Academy of Medicine, and would, no doubt, attract very wide-spread attention. All that he wished to do was to state in as simple a manner as possible, without any reference to pathological theories whatever, how he had recently been enabled to avoid the dangers of puerperal infection in his service at the Maternity Hospital on Blackwell's Island.

Many years before Pasteur had propounded the germ theory, or Lister had revolutionized the whole practice of surgery, Semelweis, as early as 1847, had introduced the use of chlorine water as an application before and during labor, in his wards at the Vienna

Hospital, and thereby brought down the mortality to a comparatively low figure. Especially after Listerism had begun its triumphant march throughout the civilized world, did antiseptic measures attract attention in obstetrics; and as early as 1870, Stasburg, of Copenhagen, had employed carbolic acid in this connection. For the past eight years he himself had used this agent for washing instruments and the hands, and for making vaginal injections twice a day during the first week after confinement. So pleased had he been with its effects that, when he was appointed to the Maternity at the Charity Hospital, he had introduced its use there; but he had found out by a sad experience that this was not sufficient to prevent the danger of infection. In private practice it was comparatively easy, as a rule, to avoid this; but the lying-in hospital afforded the only crucial test of the efficacy of any means proposed for the accomplishment of this purpose.

The Maternity on Blackwell's Island was not an independent lying-in institution, but simply an adjunct of Charity Hospital. There were usually about twenty women waiting to be confined, and the pavilions in use are quite inadequate for the number of patients. When infection first occurred in them, the patients were transferred to the general hospital, where the condition of affairs soon became worse than it had been in the pavilions, and the women had to be moved back. In 1875 there had been 517 confinements at the Maternity Hospital, with 15 deaths, a percentage of 2.67. In 1876 there were 536 confinements, with 20 deaths, a percentage of 3.78. In 1877 there were 480 confinements, with 32 deaths, a percentage of 6.67. In 1878 there were 225 confinements, with 7 deaths, a percentage of 3.11. In 1879 there were 254 confinements, with 11 deaths, a percentage of 4.40. In 1880 there were 149 confinements, with 8 deaths, a percentage of 5.37. In 1881 there were 382 confinements with 9 deaths, a percentage of 2.36. In 1882 there were 439 confinements, with 14 deaths, a percentage of 3.25. While none of these deaths were attributable to other causes, there could be no doubt that the great majority of them were due to hospitalism. In the first three months of 1883, when he himself had been the attending accoucheur, there were 108 confinements, and of these patients 11 had died. During the six months of his term of service, from the first of October till the last of March, there were 192 confinements Out of these, 46 of the women, or about one in four were seriously ill, and 39, or about one in five, suffered from inflammatory puerperal disease.

When he came on duty again, the 1st of October, 1883, the condition of the hospital was no better, nine patients having died during the previous month. In the mean while the bichloride of mercury had come prominently into notice as an antiseptic, and he now determined to give it an extended trial. He did not depend on this alone, however, but adopted several other means of preventing infection in addition. In the first place, he divided his service into two departments, one for the well and one for the sick, and also employed rapid alternation in the use of the wards. Each patient was allowed to remain in the pavilion where she was confined for eight days after labor, and was then transferred to the convalescent ward. The doors between the different wards were kept locked, all chinks were carefully filled up, and the doors to the water-closets provided with springs. As soon as a ward was vacated, it was fumigated with burning sulphur, twenty pounds of sulphur being used for the large wards and fifteen for the small ones. Every article of furniture was then washed with a solution of bichloride of mercury (1 to 1000), and fresh bed-clothes and new straw for the beds provided. In all the wards large demijohns of the above solution were kept. For the hands, it was undiluted, or with a small quantity of warm water added to it in cold weather. For use about the patients' persons, the solution was diluted one-half, and in case of post-partum hemorrhage, it was employed very hot. At the commencement of labor, the patient was given an enema and a bath, after which at least two quarts of water containing the bichloride of mercury were injected into the vagina by means of the fountain-syringe. A glass reservoir was used, with a long rubber tube leading from it, to which was attached a straight glass tube. When it was necessary to use a intrauterine injection, a curved glass tube was used instead. In cases of tedious labor, the vaginal injection was repeated every three hours. Both physicians and nurses were required to wash their hands with soap and water, employing a large, stiff nail-brush, and, before touching the patient, to let the hand rest for a minute in a solution of the bichloride. As few examinations as possible were to be made by either physician or nurse, and the former was especially charged not to put his fingers into the os uteri. No emollient was used, except when operations were performed, when glycerine was used in connection with bichloride solutions. It was preferred to carbolized oil, as the glycerine itself was possessed of antiseptic qualities.

When the head appeared at the vulva it was covered with lint, and after the expulsion of the child the genitals were kept carefully covered with the same. The placenta was then expressed by Crédé's method. Intrauterine injections were employed only in cases where it had been necessary to introduce the hand or instruments into the uterus. He never allowed any part of the placenta or membranes to remain in the uterus, and he considered the introduction of even the whole hand (if done with proper care), much preferable to running the risk of hemorrhage or septicæmia by not removing any portion of them retained. The curved glass tube, used for intrauterine injections, was fifteen inches in length, and contained a large opening at the extremity, in addition to eight holes at the side. It differed from Dr. Chamberlain's tube in being of smaller calibre (one-fourth of an inch in diameter), and in having an opening at the end, as well as a greater number of apertures at the side. The advantage of having it of smaller calibre, was that it could be used in cases of abortion where the os uteri was not very largely dilated, as well as at a comparatively late stage of the ordinary puerperal period, when the os had become contracted. The open end permitted the injection to impinge directly upon the fundus, while the numerous holes at the side, all being within a distance of four inches from the extremity, insured the thorough washing of the uterine walls by antiseptic fluid. When the intrauterine tube was used directly after confinement, it was held in position by the fingers, but if at a later period, and signs of inflammation had developed, he was in the habit of first introducing into the vagina a Cusco's speculum, which brought the parts into view, and through which the tube was passed into the uterus. At the Maternity Hospital on Blackwell's Island, diphtheritic exudation was a very frequent result of puerperal injection, and the patches in the vagina could thus be readily observed.

After this digression, Dr. Garrigues returned to the consideration of a supposed case of normal labor. As soon as the placenta was delivered the vulva was covered by the nurse with a piece of lint eight by six inches, doubled on itself lengthwise, so as to make it when folded three inches in width. Over this was placed a piece of oiled muslin nine by five inches, and over this again a large pad of oakum. The whole dressing was then covered with a piece of muslin eighteen inches square, the edges of which were folded over so as to form a kind of boat; the ends of the boat being finally fastened to the binder in front and behind by means of safety-pins. This dressing was put on with the same care that would be used in that of a wound after a capital operation, and it was renewed four times in each twenty-four hours, twice by the day-nurse and twice by the night-nurse. Before changing it the nurse was always required to bathe her hands in the antiseptic fluid. When such a dressing as this was properly employed it rendered all vaginal injections unnecessary, and thus, he believed, one of the greatest dangers of septic infection was avoided.

For, at least, eight days no visitors whatever were allowed to see the patient, and this rule included even clergymen, unless the woman was in a precarious state. Formerly he had found it necessary to exclude from the wards medical men from outside also; but since the introduction of his present plan of treatment, he thought there was but little risk in admitting physicians, and he trusted, therefore, that in the future such clinical facilities could be afforded in this institution as are now felt to be one of the chief wants in medical training in the city of New York.

All the physicians and nurses connected with the lying-in ward were forbidden to enter either Charity Hospital or the dead house. At present he employed carbolic acid only in the case of instruments, as the solution of bichloride of mercury was found to corrode metallic instruments, and also to become weakened thereby. In one or two cases, slight eruptions had been caused by the wash of bichloride of mercury, but in no instance had the use of the drug been abandoned. Some of the nurses complained at first of its making the hands sore, but the trouble was at once relieved by the application of glycerine. Under the present *regime* the lochia were kept sweet, and the wards had entirely lost the unpleasant odor which was formerly so characteristic a feature of them. The vulvar dressing was kept up as long as the patient remained in bed. If there was any case of protracted non puerperal disease, it was removed at as early a date as possible to the wards of the Charity Hospital.

As to the results obtained, he continued, out of ninety-seven cases of confinement since the first of October, not one had proved fatal, and only six of the patients had been at all ill. Of these, two suffered from perimetritis, three from metritis, and one from eclampsia. The latter was the only one who was at all seriously sick, yet some of the labors had been quite severe—two cases of version and one craniotomy being included in their number. In two cases only had there been any rise of temperature; whereas formerly this had been noticed in from one-third to two-thirds of all the cases. The physicians and nurses were now no longer over-worked as formerly, while the patients were bright and cheerful, instead of being despondent. For the good results noticed he was greatly indebted both to the house-surgeon and the head nurse, who had carried out all the details of the plan adopted with great care. The bichloride had great advantages over carbolic acid and other disinfectants. In the first place, it was a much more reliable antiseptic; and, secondly, while free from odor itself, it was an excellent deodorizer. It affected the skin of the hands much less severely, and was also much cheaper. In fact, the whole treatment had been proved to be very economical, for the cost of the materials used was very trifling when compared with that of the immense quantities of quinine, morphia, and whiskey formerly consumed in the wards.

In private practice he thought some slight modifications might be made in the treatment. It would be sufficient to change the vulvar dressing three times a day. When intrauterine injections were necessary a tin tube would be preferable to a glass one, as it was flexible, and this was an advantage in case of abortion.

It might be offered as an objection to this paper that the time in which the plan of treatment had been carried out was too short to prove anything; but he thought the change in the condition of the patients and of the wards was so sudden and so marked that it could be attributed to this cause alone. If the same careful attention were paid to details, he believed that the same good results could be continued indefinitely in the future. Finally, the reports from other hospitals in which similar plans had been adopted, corresponded in the results shown. The secret of success he considered to depend mainly upon (1) the use of the bichloride of mercury as an antiseptic, and (2) the exclusion of the air by the vulvar pad.

Dr. Murray remarked that the paper was of special interest to him, as he had been Dr. Garrigues's immediate predecessor at the Maternity Hospital. In the three months of his service, 96 women had been confined, and out of these no less than 14 had died, although four of the deaths are not attributable to puerperal disease, the exact puerperal mortality was, therefore, 8 out of 96. The fever which he had noticed prevailing was very similar to that which was met with in the lying-in wards of Bellevue Hosptal six years ago. Puerperal peritonitis was seldom seen, but there was a good deal of puerperal diphtheritis. The exudation would commence at the vulva and then extend up through the vagina, but seldom entered the cavity of the uterus. If the disease was protracted for a fortnight, however, it was very likely to involve the uterus. The symptoms are not very marked at the onset of the attack, and the temperature was not often above 100° for the first few days. After that it became more or less intermittent.

If the vulva were exposed at an early period of the disease, one could watch a slight blush come over any excoriations that might be present. Within twenty-four or forty-eight hours (though sometimes a slightly longer period) this would be succeeded by an ashen hue, and the diphtheritic exudation would be sure to be formed. With this immediately ensued typhoid symptoms, and in some cases the patients became semi-comatose. Various kinds of treatment were employed, and carbolic acid yielded fairly good results, although the fever was by no means controlled.

In a certain ward almost every case was attacked with puerperal diphtheria, and though it was disinfected as thoroughly as possible, the same result was noticed afterward. When Dr. Garrigues came on duty a new ward was given him, which had not been used for a year, and he thought that this circumstance might possibly have had something to do with the absence of mortality which he had reported. Thus, in Charity Hospital upon the establishment of the Maternity, it had been generally found that when a new ward was occupied, which had not been in use for some time, there was a great improvement for a week or so. Still, while this might have had some effect, he questioned whether the remarkable results which Dr. Garrigues had spoken of would have been obtained without the strict attention to details of treatment which he had carried out so faithfully. It would be very difficult to do the same in private practice, he thought, yet the material part of the plan might be adopted, and in case there were any lesion of continuity iodoform or a solution of the bichloride of mercury could be applied.

When carbolic acid was applied locally it almost invariably produced a marked tenderness of the part, which was afterwards followed by lack of sensibility. Yet when the slight slough which it occasioned had separated, he had seen a diphtheritic deposit appear and spread to all the points with which the acid had come in contact. Even when the parts had been actually cauterized this had been the case. The difference between a hospital like the Maternity and private practice was so great that to an outsider the strict precautions recommended would seem almost unneccessary.

Dr. W. Gill Wylie said that about six months ago he had read a paper before the County Medical Society on the same general topic, and he was glad to find that Dr. Garrigues did not contradict anything that he had said on that occasion, but only added confirmation to the statements that he had made. He was a thorough believer in antiseptic midwifery, and had commenced to practise it when an interne of Bellevue Hospital in 1871. During his term of service in the lying-in ward he had attended thirty-six confinements, and the only death that occurred was the result of convulsions. Since then he had employed antiseptics in every case which he had had in private practice. It was his plan to wash out the vagina with a solution of carbolic acid (one to thirty, or one to fifty), and to carbolize all the bed-linen. He insisted on having two sets of blankets, and at least thirty-six napkins. He had never had a single case of puerperal fever, and had never even seen any rise in temperature during the first few days after delivery, except in one case, where there was a dry labor, and it was necessary to use forceps.

The only instances of increased temperature which he had met with were in cases of mastitis after the eighth day. He would now use the bichloride of mercury. He could not agree with Dr. Murray in the opinion that there was not much necessity for preventing infection in private practice. A physician might have a long series of cases without any fever, but unless precautions were taken, it was liable to occur sooner or later.

Dr. Gillette remarked that he had been connected with the maternity service of Charity Hospital for twelve years, and he thought that there could be no question as to the importance of all the suggestions which had been made in the paper of the evening, though there might, perhaps, be some discussion in regard to some of the methods proposed. As being the latest germicide. the bichloride of mercury was now highly lauded, and all must bow down to it; though he was not convinced that it was more valuable than some other agents. He had not, however, as yet used it himself. As regards Dr. Garrigues's dressing for the urethra, theoretically it was excellent; but he did not see how it could be of any benefit practically, since it could not be kept in absolute contact with the parts, and hence there was abundant opportunity for the entrance of any germs which might be in the air.

He trusted that the good results obtained by the Doctor would be permanent, but at the same time he thought he ought not to be too sanguine. He was sorry that he had not commenced his account of the Maternity with the year 1875, or just after the obstetric patients were removed from Bellevue to Charity Hospital, in consequence of the fact that puerperal fever had been epidemic in the wards of the former for years, and all efforts to break it up had failed. Finally, the mortality had become so great that this step was resolved upon, and forty patients were transferred to Charity Hospital.

At that time, Dr. Gillette said, he was in sole control of the lying-in wards there, and although the women were saturated with hospital influences, under the effect of extraordinary cleanliness only one case of puerperal fever occurred among them. Nothing was then known of Listerism, and nothing was done in the way of antiseptic treatment except the adoption of carbolic acid baths. During the year six hundred and thirteen confinements occurred, and among the whole number only two cases of puerperal septicæmia were met with. Cleanliness he considered the real secret of success, and he thought the fact that Dr. Garrigues commenced his service in a new ward had no little to do with the good results which he had obtained.

Dr. Alexander Hunter said that he found himself quite in accord with the author of the paper in his views. In regard to the vulvar compress employed, however, he agreed with Dr. Gillette. If the space to be covered were two or three inches in width, he could see how it might be of service, but as in reality the thighs of the patient were ordinarily in direct contact with each other, he did not think it possible for the compress to exclude germs. He then spoke of the superior advantages, in his opinion, of the metallic tube of Dr. Lyman, of Boston, for intrauterine injections, when these were required. He also preferred the Davidson syringe, with its intermittent strain, to the fountain syringe recommended by Dr. Garrigues. In private practice he would be quite willing to dispense with the pad and depend on vaginal injections, together with the partial saturation with solution of bichloride of mercury of the napkin usually laid between the thighs.

Dr. Baruch spoke in unqualified disapproval of all antiseptic injections after normal labor, and proceeded to give his own experience with them. During the last twenty years he had attended some nine hundred cases of confinement, and among them had met every sort of complication. In the whole number there had been but one death preceded by febrile symptoms, and in this he believed that no septic influence was concerned. His experience with prophylactic vaginal injections was comparatively limited, but it had been sufficient to cause him to resolve to give the method a wide berth in the future. It was by the paper of Dr. Wylie, to which he had referred, that he had been induced to make trial of them, and in the next cases which he attended, he made use of an injection of a three per cent. solution of carbolic acid, night and morning. Yet in six cases, which were all faithfully syringed, he met with four which were undoubtedly of septic character.

Dr. Baruch then went on to say that there was now quite a reaction against the use of prophylactic injections in Germany, and quoted from Fehling, of Stuttgardt, and other authors. He thought the objections to their use well founded. In the first place, he held the opinion that the puerperal woman ought to be kept perfectly quiet, and this was impossible when injections were made every few hours. Secondly, it was impossible to make them without giving rise to a certain amount of pain and nervous disturbance. Thirdly, there are very few nurses who know how to give an injection properly. In the fourth place, the injections were liable to displace clots, and thus give rise to hemorrhage, or else open avenues for infection. Finally, they might also loosen adhesions. He believed that simple cleanliness before, during, and after labor, was all that was necessary, as a rule, and that vaginal injections should never be used except in cases where there was danger. In Germany, iodoform pencils, made up with glycerine and starch, had recently been used with excellent results, and their adoption here (two or three only being required in the whole course of the puerperal period), might, perhaps, open a satisfactory way out of the dilemma in which we were placed by the advocates of injections.

Dr. Garrigues then brought the discussion to a close. In regard to the suggestion that the success which he had met with might be attributable in a great measure to the new ward in which he began his service, he said that while it was true that there was one new ward, there were two others which had been in constant use, and each of the three was used for the lying-in-women in rapid alternation. In one of these wards there had been some particularly bad cases, and one of them had ended in erysipelas. He agreed with Dr. Wylie as to the necessity of taking every precaution even in private practice here in New York, where the skilful obstetricians met with cases of puerperal fever. In regard to the vulvar dressing, he said that it had been designed with special reference to the parts to which it was to be applied, its width being really just the distance between the thighs, and it had seemed to him to serve a very admirable purpose when properly adjusted. Dr. Gillette had not understood him correctly, for it was in the year 1875 that he had commenced to give the statistics of the lying-in department of Charity Hospital, and it was from Dr. Gillette's own report that he had quoted the figures of that year—five hundred and seventy confinements and fifteen deaths; which was certainly a great improvement over the previous mortality at Bellevue.

(Dr. Gillette had left the hall before the time of Dr. Garrigues's closing remarks.)

As a rule, he was strongly opposed to intrauterine injections by way of prophylaxis, but after labors in which the hand or instruments had been introduced into the uterus, or where there was a dead child (one which had been dead some time), he thought they were advisable. Vaginal injections he did not think so dangerous, especially in private practice; but with the compress which he had described they became superfluous. One of the great advantages of the use of the latter was, that the nurse had very little to do with the genitals. Tarnier, of Paris, was the first to use bichloride of mercury in obstetric practice, in June, 1882.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

Stated Meeting, December 5, 1883.

THE PRESIDENT, ALFRED STILLÉ, M.D., IN THE CHAIR.

DR. CHARLES W. DULLES, presented some

CRITICISMS ON THE SPECIFIC THEORY OF HYDROPHOBIA.

The theories as to the nature of hydrophobia, he said, are contradictory and illogical; the teachings as to its treatment are without the slightest hope of success. In regard to both, the ablest men who have discussed it occasionally or systematically are in irreconcilable opposition While some hold to certain modes of communication, others strenuously deny them. While some admit its spontaneous origin, others will not admit it for a moment. While some think the virus is to be found in the saliva, the blood, the bronchial mucus, the milk, the flesh of rabid animals, others limit it to the first of these alone. In regard to the period of incubation the widest divergence of opinion exists. The range is from one day to forty years, and no one seems to have been able to fix a limit to either its shortness or its length. Equal contradiction meets the gaze when one turns to the matter of treatment. From the throwing into a fish-pond, as practised by Celsus, to the inhalation of oxygen, as recently practised by Drs. Schmidt and Zebeden, there is a variety of methods which demonstrates how utterly every attempt to find a specific has lacked the guidance of any accurate idea as to the nature of the disorder. To almost any statement of men whose names are highly respected in medicine, may be opposed the most positive and contradictory statements of others equally respected.

The prepossession of a theory which, at the outset, demands a certain surrender of the judgment will impair the freedom of the judgment at every subsequent step. Such, it seems to Dr. Dulles, is the condition in which every believer in the specific nature of hydrophobia stands. The assumption of a specific virus which, and which alone, is the originator of the disease in any individual compels its adherents to bend their judgment to accept the belief that there is a virus which behaves in a way contradictory to that of every other virus about which we have any positive knowledge.

One might suppose that such a contradiction would lead observers to be constantly on the look-out to find some other way of explaining the phenomena of hydrophobia, and that everything that was presented as evidence in support of it would be subjected to the most rigid scrutiny. But the literature of the subject shows that the very opposite is the case. The *post hoc propter hoc* argument is the one which rules here. A careful perusal of a large number of recorded cases leaves the impression that they have not been studied with any idea that they might be something else than what they appeared to be. Though it is no secret that the dread of water is a symptom of a great variety of affections, one finds over and over again the ablest men resting a diagnosis on this which is acknowledged by most systematic writers to be the least reliable of its signs. Another thing which has struck Dr. Dulles in examining the records of cases is the readiness with which reporters, aware of the objection, so often raised, of the effect of mental influence, accept the statements of friends or the silence of patients in regard to it as evidence that it does not exist.

Another curious thing, to be observed in the literature of hydrophobia, is the way in which the madness of the dog is often—one might say usually—deduced from the diagnosis of hydrophobia in the man; instead of the diagnosis of hydrophobia being made to rest upon reliable evidence that the dog was really mad. It is uncommon to find any proof whatever that a dog to which hydrophobia is attributed was rabid, this being, with rare exceptions, a pure assumption. The one phenomenon of a dread of water usually determines the conviction of the physician that he has a case of hydrophobia before him, and settles his opinion of any dog that may ever have bitten the patient, and cannot now be accounted for. Nay, more, this mode of reasoning has led certain writers to the assertion that there may be a passing state in dogs in which they may communicate to a human being hydrophobia, but themselves recover. Thus is the struggle to support the specific theory kept up when circumstances seem to be most adverse to it.

Dr. Dulles finds in the recorded cases—with very rare exceptions—that, when once hydrophobia is suspected, every phenomenon that occurs during life, every lesion that is found post mortem, is unhesitatingly set down as a feature of this disorder; and the idea does not seem to be entertained that many of them are grounds of suspicion that some other disorder is present. In this way, all lines of distinction between hydrophobia and disorders which simulate it are erased; and it remains for every medical man who is called to a patient who has a dread of water, accompanied with exaltation of reflex excitability, to inquire for a bite or scratch of a dog or cat; if one cannot be drawn out, to assume that it has been received and forgotten; then to make a diagnosis of hydrophobia, after which it is only necessary for the patient to die, to make a complete record. If to this be added a careful microscopical examination of the state of the brain and spinal cord, the observer will have an exact counterpart of the process by which the famous conclusions of certain investigators—often quoted by those who have not taken the pains to go to the evidence upon which they are founded—were arrived at.

Concerning the pathological lesions of hydrophobia, he said that they all tend to confirm the opinion that as yet no gross or microscopical lesion has been discovered which can be regarded as pathognomonic of rabies or hydrophobia.

In closing, he said, "I have now been engaged for nearly two years in a laborious study of the evidences upon which the general belief in regard to hydrophobia rests, and I have been gradually led to certain convictions different from those with which I started, and which I feel it my duty to make public. One of these is that hydrophobia is not a specific, inoculable disease, derived from the bite of a similarly affected animal. Another is that if we wish to have an accurate, scientific knowledge of what too often actually takes place, and is usually called hydrophobia, we must begin the study of it unprejudiced by the views heretofore generally entertained in regard to it, and with canons of criticism very different from those heretofore deemed sufficient.

"I know that these convictions are not novel, and that they have been stated and defended with arguments before. I know, too, that they have heretofore failed to secure the assent of the greatest men, who in every generation have adorned the profession of medicine. None the less, however, do I believe them to be true, and that the time will come when they will not be —as they have been in the past—characterized as too absurd to be discussed, or decried as too dangerous to be tolerated."

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, December 20, 1883.

The President, Fordyce Barker, M.D., LL.D., in the Chair.

Dr. Charles Heitzman read a paper entitled

A REPORT ON THE PROGRESS OF BIOLOGY IN EUROPE.

He commenced by saying, that when in the years 1872 and 1873 he enunciated his new views, doing away with the universally accepted doctrine, and substituting a different structure, both for single elements and the whole animal body, he did not expect an immediate approval by the entire scientific world. In order to make out satisfactorily this newly described structure, both an unusually well trained eye and unusually good lenses were required.

One of his very first claims, he said, had been in regard to protoplasm, which had always before been regarded as structureless, but which he had found to have in reality a well-marked reticulated structure. He had claimed that this network building up the nucleus and the nucleoli was the living matter. The second proof to him was that all new formation started from the points of intersection in the living matter. In consequence of the novelty of these views, he had been very anxious to learn what the opinion of the best microscopists in Europe was in regard to them. Many, he found, had adopted them, but there were some exceptions, such as Klein, of London, who had objected to his assertion that the contained substance was liquid, while the whole was ensheathed by a continuous membrane of living matter.

Many years ago Beale, as was well known, claimed that the nucleus alone consisted of germinal matter. To-day, he continued, we saw that the nucleus was nothing more than the reticulum in more compact form. The reticulum was especially prominent in mucous elements, but in every instance the very best lenses were required in order discover it.

Having referred to the objections of Spina, of Prague, he went on to say that in 1872 he had announced, contrary to the views of the advocates of the cell doctrine, that the so-called intercellular substance was not destitute of life, but endowed with the same life as the ensheathed elements. He had demonstrated this first in cartilage, and in order to do so had employed unusual agents, such as nitrate of silver and chloride of gold. On this was based a new view of the structure of the whole animal body. If the so-called cells were of the same structure as the intermediate or basis structure, the whole being was the same uninterruptedly from the crown of the head to the sole of the foot. The facts on which this theory was based were now acknowledged by many observers.

Spina, of Prague, had demonstrated, by his observations of the omentum of the frog, the undulating motion in the basis substance, and in his last publication he had definitely announced that the time had now arrived to give up the cell doctrine. Stricker, in the last volume of his *Pathology*, gave a chapter to the explanation of all the facts bearing on the matter, in which he agreed with himself, and gave him full credit for his discoveries; distinctly admitting that there was no difference, as regards life and the power of reproduction, between the reticulum and the cells proper.

Both Recklinghausen and Stricker now denied the wandering corpuscles of Cohnheim. From his own researches he had seen enough to convince him that there were in reality no migrating corpuscles. If, therefore, his views are correct, the whole subject of the pathology of inflammation would have to be altered. Stricker had contended for twelve years against Cohnheim's teachings, and in 1873 he had called attention to the point that pus never produces new tissue.

Then passing on to the subject of tuberculosis, he said that experiments had been made in Vienna which fully confirmed his own views on the subject. In 1873 he had stated that from the examination of the lungs of three hundred persons who had died of tuberculosis, he believed it to be a strictly constitutional disease, and later he had declared that the whole trouble could be explained on the ground that it occurred only when there was already a lack of living matter for the reproduction of blood corpuscles. In tubercle there are no bloodvessels whatever. It seemed to him that the growth which Koch called bacillus merely found a favorable place for development in those affected with tuberculosis. He himself had observed that the mucus from the nose of a perfectly healthy individual, when allowed to stand for a few days, swarmed with the tuberculous bacillus. When he was in Stricker's laboratory in Vienna, there was not the slightest doubt that the bacillus was not the cause, but a product of tuberculosis. But this view, he acknowledged, was held in Vienna alone. In Berlin all were fully convinced that the bacillus produced tuberculosis; and the same was also true in regard to London. At present, therefore, the question was one which did not as yet permit of a conclusive settlement.

In conclusion, he said that he had reason to be pleased with the results which he had observed in Europe.

Dr. William H. Welsh stated that he was at variance with Dr. Heitzman in regard to almost every point upon which he had touched. In regard to the structure of protoplasm, he thought that Frohman was clearly entitled to priority. It was true that he had not described its distinctly reticulated character with the same fulness as Heitzman, but he had first pointed out the existence of fibrillæ. In regard to the character of the nucleus, in the next place, he could not at all agree with Dr. Heitzman. To him, as to most observers, it appeared to be of an entirely different nature from the surrounding structure. But the essential point of Heitzman's theory was the structure of epithelial tissue. This was a question that was still *sub judice*, and he thought that the general verdict of microscopists in regard to the new doctrine at the present day would be, "not proven." Heitzman and Stricker stood almost entirely alone in their peculiar views as yet. Finally, he took issue with Dr. Heitzman in regard to the subjects of tuberculosis and inflammation.

Drs. Elsberg and others then spoke, and the discussion was brought to a close by Dr. Heitzman, after which the Academy adjourned.

NEWS ITEMS.

BERLIN.

(From our Special Correspondent.)

A Second Cholera Report from Koch.—A second report of the Cholera Commission, dated Suez, 10th of November, mainly confirms the former statements. The last post-mortem examination, made in Alexandria, furnished the same bacilli in the intestinal walls as were before noted, but the inoculation-experiments, although modified and multiplied in every way, were equally of no result whatever.

The Commission then left Alexandria for Cairo, Damietta, and Suez. At all these places important inquiries were made about the origin of the last epidemic, the results of which, although seemingly quite positive, are spoken of with due reserve. Of the greatest epidemiological interest was an excursion on board the Egyptian steamer "Damanhur," bound, with hospital equipment, for the quarantine harbor at Tor. Five hundred pilgrims, coming from Djedda, reached this place the day after the arrival of the Commission. Although the ship-surgeon declared them all healthy, a certain number proved ill from choleraic symptoms, and were immediately sent to the quarantine hospital. Returning from a trip to El Wedj some days later, the Commission found that another ship had arrived also with some sick pilgrims, and that the cholera had broken out in both camps, three pilgrims from the first, and one from the second ship having died. A thorough disinfection followed this excursion.

During their sojourn in Egypt, Dr. Koch and his assistants have attentively studied the water-supply and filtration, the influence of the level of the Nile upon the course of the epidemic, the methods of interment, the pollution of the soil by cesspools, the meteorological conditions, etc.

Valuable researches were also made on dysentery, on the prevalence of tuberculosis in Egypt, and on some parasitic diseases (Distoma hamatobium, Anchylostoma duodenale, Filaria sanguinis).

Egyptian Ophthalmia.—The examination by the Commission of fifty cases of Egyptian eye-disease gave evidence that two different processes are confounded under this name. The one, of a more malignant character, is caused by a species of bacteria, similar to, and perhaps identical with, the micrococci of gonorrhœa. The other form, less serious, is characterized by the presence of very small bacilli in the interior of the pus cells.

The members of the Commission express themselves very much indebted to the Khedive for having granted them the opportunity to visit the quarantine harbors.

CINCINNATI.

(From our Special Correspondent.)

The Holiday Vacation.—Our medical colleges have closed for a vacation of two weeks. The societies, also, will hold no sessions until after the holidays.

A New Hospital for Children will be opened on New Year's Day. It is to be known as the Episcopal Hospital for Children, and will be under the supervision of a board of managers consisting of ladies from the Episcopal churches of the city. Dr. William Carson will take charge of the medical cases, and Dr. N. P. Dandridge, of the surgical. The building appropriated for use as a hospital was formerly a residence, and is located in East Walnut Hills, a delightful place for it, but so far removed from the more densely populated parts of the city that its usefulness, especially to the poor, will necessarily be limited.

The Children's Hospital that was established a few months ago, and to which reference was made at the time in The Medical News, is doing all that was anticipated of it, and it has been filled almost to the limit of its capacity ever since it was opened.

Scurvy in the County Jail.—Several cases of scurvy have occurred of late in the Hamilton County Jail, in this city. Aside from the clinical interest arising from the appearance of a disease so rare in this part of the world, the cases are arousing still greater interest because of the ill-treatment of the prisoners, which their occurrence implies. The chief diet of the prisoners has been soup, salt meats, and corn-bread, with almost no vegetables. These articles, the prisoners say, were prepared so as to be palatable, but were so deficient in quantity as to leave them in constant hunger.

The Ohio State Sanitary Association will hold its first meeting in Columbus, February 14th and 15th. It is anticipated that some action will be taken toward securing the appointment of a State Board of Health.

BOSTON.

(From our Special Correspondent.)

Hospital for Incurables.—Another charity whose inauguration was also mentioned in The News at this time last year, is the Hospital for Incurables. This institution, whose scope and work thus far are very similar to those of the Philadelphia Hospital for Incurables, was established by a lady whose life for many years has been wholly and incessantly devoted to work among the poor—Miss Cordelia Harmon—and who lived only six months after having thus nobly crowned her unselfish life. Resources, she had absolutely none. Nearly the entire amount by which the hospital thus far has been supported was raised by Miss Harmon alone. She engaged and furnished the house during the rare intervals of leisure in her busy life, and since the hospital was opened it has, in a small way, been a success. Sixteen patients, all of them women, have been received. But the necessities of the public are so pressing that a meeting was called this week to disscuss the feasibility of enlarging and developing this vigorous nucleus. A preliminary committee was appointed, with authority to form a new organization, consisting of managers, and visiting committee, and other lay officers. Since Miss Harmon's death the administration of the charity has rested wholly upon one or two individuals, who are responsible to nobody. All this will be changed, the hospital will be incorporated, and a call made for funds in such amount as will at once give the institution a strong basis and permanent status. The need of such a refuge on a large scale is sadly apparent in Boston. The City and Massachusetts General Hospitals, by their charters, are not allowed to give admittance to chronic cases. During the past five years the first of these hospitals has refused admittance to more than *thirteen hundred* "incurables." The Massachusetts General Hospital does not so strictly classify cases refused, but does record a yearly average of five hundred persons who could not be admitted because in condition of chronic disease.

The public need of a hospital for incurables in this city has been publicly recognized by the Trustees of the Massachusetts General Hospital, who, in their report for 1881, published in 1882, express their sense of this need, and also their willingness to receive funds toward the establishment of a hospital. This position of the trustees has heretofore been somewhat of a stumbling block in the way of the friends of the Harmon Hospital, for they found that the public were waiting to see what the Massachusetts General Hospital intended to do for incurables, and, therefore, in many cases, refused to contribute to the younger hospital. They naturally preferred to help incurables through the older institution. Becoming aware of this, and considering the obstacle to their own success a serious one, the workers for the little hospital for incurables now in operation, appealed to the Trustees of the Massachusetts General Hospital, asking their protection for the infant hospital. After due consideration, pending which the matter was referred to a special committee, the Trustees formally declined to accept the younger hospital, and for the following reasons:

At Somerville, the Massachusetts General Hospital has two hundred insane patients in a locality which formerly was one of great beauty and extreme quietude. Progress has encircled this place with railroads and factories of various dimensions, which have succeeded in converting this peaceful retreat into a most unhygienic pandemonium. The trustees of the hospital, therefore, feel it a matter of duty to move their insane department to their lands in Belmont, in which town their Convalescent Home is now in operation. To do this will involve a large outlay. There was a period during which the Somerville property, if it had been converted into cash, would have gone far toward meeting the cost of new buildings at Belmont. As it is, however, the Somerville real estate has largely depreciated in value, and consequently nothing can be done for the insane patients of this hospital until more funds have been raised. For this reason the trustees feel that while this prior claim upon their treasury exists, they cannot appeal to the public for funds on behalf of the generally incurable. If they ask at all, it must be for the insane. For years to come then they can give no thought to the care of incurables. The day may come when they can see their way to doing so, but they have left the hospital for incurables to do its best independently of their protection. It is hoped that this decision may become generally known, for it would thus both directly and indirectly be a help to the new hospital. The public would soon learn that incurables were to be cared for by only one institution and their money would flow that way.

The subject of further accommodations for consumptives (for whom there is at present inadequate provision) is also being agitated. Many, however, feel that it would be a mistake to multiply the number of small institutions. The proper course would be a generous contribution to the hospital for incurables, say half a million of dollars. This would make it perfectly easy to provide for consumptives as well as for general cases.

Egyptian Rags.—Surgeon-General John B. Hamilton, of the Marine-Hospital Service, has made arrangements, through the State Department, for the thorough disinfection of all Egyptian rags stored in Alexandria, and bound for the United States. This disinfection is to be performed before the rags are shipped, and will consist in steaming them, and subjecting them to such other disinfectants as may be found necessary to purify them.

Medical Legislation in New York.—We are informed that, at the ensuing meeting of the State Assembly of New York, a bill is to be introduced at the request of the Buffalo Medical Society, providing for a State Medical Board which shall have the sole power to issue licenses to physicians to practise in the State. The Board is to consist of six physicians, two homœopathic practitioners, and one eclectic member. It is now stated that the irregulars, while favoring the general purposes of the measure, are already preparing to oppose the bill unless more equitable representation is granted their school.

Large Damages for Libel.—Last year Dr. McLean, Demonstrator of Anatomy in the Medical Department of the State University, and a well-known surgeon, was charged with criminal relations with a lady patient from Canada, who sought his advice, the publication being made in *The Evening News*, an afternoon paper of Detroit. Dr. McLean sued the newspaper for libel, which it undertook to justify, but the jury rendered a verdict of $20,000 damages. The case was appealed to the Supreme Court, which last week affirmed the judgment of the Court below.

New Medical Baronets.—The Queen has conferred the honor of a baronetcy on Mr. Joseph Lister, F.R.S., F.R.C.S., and Mr. William Bowman, F.R.S., the eminent ophthalmologist.

Prof. Owen.—Prof. Owen's state of health and his advancing years have necessitated his resigning his appointment as Superintendent of the Natural History Departments of the British Museum, which he has held with so much distinction for more than a quarter of a century. Prof. Owen's services to science are well known. In the questions which now perplex and divide biologists, he has maintained the position of a conservative naturalist of the pre-Darwinian epoch, and been regarded as somewhat behind the age. But all his contemporaries will acknowledge, and the most eminent of them most readily, that his place is among the foremost of those who have illustrated science and advanced its pursuit in England.

International Congress at Rome.—The European powers have signified their acceptance of the invitation to meet at Rome for the purpose of holding a Sanitary Congress.

Professor Pajot.—By a decree of November 17, M. Pajot, Professor of Midwifery, has been transferred at his own request to the Chair of Clinical Obstetrics, recently made vacant by the death of Prof. Depaul.

German Liberalism.—A French journal, *L'Hygiène Pratique*, has been recently interdicted in Germany in the following words: "This journal, founded in 1882, and edited by a committee of savants and vulgarians, such as MM. Pietra Santa, Camille Flammarion, Louis Figuier, W. de Fonvielle, Henri de Parville, Félix Hément, Dr. E. Monin, Dr. Ed. Barré, etc., is applied solely to the popularizing of sanitary science without treating at all of questions of policy." This action, says a French journal, is only to be explained by the inconceivable hatred for every thing that is French.

ORIGIN OF THR WORD "CHARLATAN."—It is generally admitted that the word "charlatan" is derived from the Italian word *Ciarlare*, to chatter, to prate. It appears that up to the 16th and 17th centuries the word was pronounced "chiarlatan." A German journal gives its etymology differently: a Paris physician, Latan, went through the town in a chariot containing his drugs, and in which he examined his patients. This caused the expression "Voila le Char de Latan," which was subsequently corrupted into "charlatan."

VITAL STATISTICS OF ENGLAND.—The quarterly return of marriages, births, and deaths in England, ending September, 1883, shows the resident population of the United Kingdom to be 35,639,060 persons; that of England and Wales being 26,770,744, of Scotland 3,825,744, and of Ireland 5,042,572. Total births in the United Kingdom 271,892 children, deaths 148,827, and marriages 119,428. Birth-rate, 30.3; death-rate, 16.6; marriage-rate 13.4. The annual death rate from diarrhœal diseases as compared with continental cities is given as follows: In twenty-eight large English towns, 2.1 per 1000; Breslau, 8.2; Munich, 8.4; Brooklyn, 8.7; Berlin, 11.3.

PHOTOGRAPHY IN HOSPITALS.—A photographic studio has now been attached to most of the French hospitals, for photographing the sick persons at different times. The rapid dry-plate process is employed. An electrically operated camera, devised by Prof. Charcot, of the Saltpêtrière, is very useful in taking, in rapid succession, a series of views.—*Med. Times and Gazette*, Dec. 1, 1883.

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending December 15, 1883, indicate that puerperal fever has increased, and that intermittent fever, influenza, remittent fever, rheumatism, and inflammation of bowels, have decreased in area of prevalence.

Including reports by regular observers and others, diphtheria was reported present during the week ending December 15th, and since at twenty places; scarlet fever at eighteen places; and measles at twelve places.

NOTES AND QUERIES.

THE METRIC SYSTEM.

To the Editor of THE MEDICAL NEWS.

SIR: In reading a letter of Dr. Prentiss in THE MEDICAL NEWS, on the use of the metric system of weights and measures in prescribing, one cannot fail to perceive what perfect exactness ought to ensue from its adoption, if grains, drachms, scruples, etc. could be suddenly annihilated and erased from the tablet of our professional memory. Alas for the "if"! As Touchstone says, "There's great virtue in an if." The metric system at present does not give that boasted exactness which it ought; and for it to be attained, the old system must be wiped out utterly, the whole mass of medical literature revised; in fact, we must forget that there ever were such things in existence as grains, scruples, etc. Until such a state of things does come to pass, which is highly improbable, the metric system fails to be an exact one in prescribing, and is only an approximate one. In the District of Columbia there are but few druggists who have and use the metric weights and measures. That they all pride themselves on being able to translate or convert one system into the other is true, and it is just here lies the error which makes the metric system an approximate one instead of an exact one.

Take the first prescription of Dr. Prentiss:

R.—Morphiæ Sulph.	1 06
Hydrat. Chloral.	6 00
Syr. Aurant Cort.	25 00
Aquæ,	*ad* 100

In looking over ten tables, giving the equivalent of a grain in centigrammes, I find seven different values, the lowest, 0.05; the highest, 0.07; and for the ounce, four values, the lowest, 30, the highest, 32 grammes.

Now in the prescription above, the druggist must work back the centigrammes into grains, if he have not the weights, which he generally does not. In fact, it is a question if three druggists would produce the same result. One might get less than a grain if he takes .07 — 1 grain; a second, a grain if he takes .06 — 1 grain; and a third, more than a grain if he use .05 gm. as equivalent for a grain. The amount in either case would be an approximate one; the difference small—not enough to do harm, but possibly enough to prevent good. The physician is in the same condition of perplexity if he wishes to write for a grain in the metric system. From one table of comparative equivalents he will find his grain = .05; in a second, .06; and in a third, .07. By the time the physician has settled upon his equivalent, and then the druggist upon his, it will take some time to find out the unknown quantity in the prescription. These are well worn and old objections, but I think they still remain opposed to the reputed exactness of the metric system. In fact, upon the blank form of the doctor's, the statement 1 grain or 1 minim = .06, as explanation of how the metric system may be utilized, is not exact, but a close approximation.

C. F.

To the Editor of THE MEDICAL NEWS.

SIR: In your issue of Nov. 24th, I notice an answer by Dr. Prentiss to a protest against the use of the metric system in prescribing. I think he neglects some of the beauties and simplicities of the metric system, and venture to criticise the critic.

I think his prescription looks better in this shape:

R.—Morphiæ Sulph.		10
Olei Menth. Pip.		50
Acid. Hydrocyan. Dil.	1	
Chloroformi,	3	
Tr Cannab. Indic.	20	
Tr. Capsici,	20	
Glycerini,	20	
Alcohol,	*ad* 100	

M. S. 10 cc. every four hours, etc.

Medicine glasses graduated to five, ten, and twenty cubic centimetres could be used, and should be used when active and dangerous remedies are prescribed.

Even if dessertspoonfuls are ordered, there can be more "rounding off" in the prescription of Dr. Prentiss; for instance, 3 50 and 25, instead of 3.60 and 24. This would be easier for the druggist, and more in the spirit of the metric system. When this system is used, it is certainly simpler to order five, ten, or twenty doses, of five, ten, or twenty cubic centimetres each, than ordering eight, twelve, or sixteen doses. The amounts are more easily ascertained, and it is more "metric."

Again, in writing for a five per cent. solution of carbolic acid, I would write:

R.—Acid. Carbolici,	5 grammes,
Aquæ,	95 "

Not 100 grammes of water, as Dr. Prentiss directs.

As long as the use of the metric system is not compulsory, its use in prescribing will, I think, remain very limited.

Respectfully,

E. F. TIEDEMANN, M.D.

O'FALLON, ILL., Dec. 3, 1883.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

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